



General Assembly

Ordinary Member's Attendance List

Agenda of General Assemblies

Decisions of the General Assembly

Minutes of General Assemblies

Reports to the General Assembly

Ordinary Member Delegates and Advisors Attendance List

Country	Cat.	Ordinary Member Name	Delegate, Advisers	virtual/ in person
Algeria 10002	3	Institut National de Cartographie et de Teledetection		
Argentina 10115	2	Instituto Geográfico Nacional		
Australia 10004	5	Surveying and Spatial Sciences Institute - Remote Sensing & Photogrammetry Commission	Petra Helmholz Clive Fraser Sisi Zlatanova	in person
Austria 10005	4	Österreichische Gesellschaft für Vermessung & GeoInformation	Camillo Ressler	in person
Azerbaijan 10006	2	Azerbaijan representation of ISPRS - Baku State University		
Bangladesh 10007	1	Center for Environmental and Geographic Information Services		
Belgium 10010	3	VITO N.V.		
Botswana 10012	1	Ministry of Land Management, Water and Sanitation Services		
Brazil tbc	4	SELPER	Hilcéa Ferreira Raul Feitosa Laurent Polidori	virtual in person in person
Brunei Darussalam 10014	1	Survey Department, Ministry of Development		
Bulgaria 10015	2	Union of Surveyors & Land Managers in Bulgaria		
Burkina Faso 10016	1	Institut Geographique du Burkina		
Cameroon 10017	1	La Cameroon Geomat		
Canada 10117	5	Canadian Remote Sensing Society	Ahmed Shaker Derek Lichti Gordon Staples	in person
Chile 10019	1	Sociedad Chilena de Fotogrametria y Sensores Remotos	Rodrigo Monzon	in person
China 10020	8	Chinese Society of Geodesy Photogrammetry & Cartography	Peng Zhenzhong Deren Li Chen Jun	virtual
China Taipei 10021	4	Chinese Taipei Society of Photogrammetry & Remote Sensing	Jen-Jer Jaw Fu-An Tsai Su-Fen Wang	virtual in person virtual
Colombia 10022	2	Sociedad Latinoamericana de Especialistas Percepción Remota y Sistemas de Información Espacial		

Cote D'Ivoire 10113	1	Côte d'Ivoire Géomatique		
Croatia 10025	2	Croatian Geodetic Society - Sec. for Photogrammetry, RS and Geoinformations	Dr.-Ing. Andrija Krtalić Rinaldo Paar Jasmina Trupković	virtual
Cuba 10026	1	GEOCUBA		
Cyprus 10104	2	Department of Lands and Surveys	Georgia Papathoma Economidou Andreas Demosthenous Mr. George Kokosis	virtual
Czech Republic 10028	2	Society for Photogrammetry and Remote Sensing	Karel Vach Václav Šafář Pavel Holubec	in person
Denmark 10029	3	Geoforum Danmark	John Kamper	virtual
Egypt 10030	2	Egyptian Committee of Surveying & Mapping		
El Salvador 10031	3	Instituto Geográfico y del Catastro Nacional		
Ethiopia 10033	1	Ethiopian Geospatial Information Institute		
Finland 10034	3	Finnish Society of Photogrammetry & Remote Sensing	Petri Rönnholm Matti Vaaja Ville Lehtola	in person
France 10035	6	Société Française de Photogrammétrie et de Télédétection	Aurélié Sand Michael Tonon	in person
Germany 10036	8	Deutsche Gesellschaft für Photogrammetrie, Fernerkundung und Geoinformation e.V.	Uwe Sörgel Georg Bareth Michael Cramer	in person
Ghana 10037	1	The Society for Photogrammetry & Remote Sensing	Stephen Djaba Priscilla Atta Djaba	in person
Greece 10038	2	Hellenic Society for Photogrammetry & Remote Sensing	Konstantinos Karantzalos	in person
Hong Kong 10039	2	Hong Kong Institute of Surveyors		
Hungary 10040	3	Hungarian Society of Surveying, Mapping and Remote Sensing		
India 10041	8	Indian Society of Remote Sensing	Prakash Chauhan Sameer Saran Praveen Kumar Thakur	in person
Indonesia 10042	1	Indonesian Surveyors Association		
Iran 10043	3	National Cartographic Center of Iran		
Iraq 10044	1	State Commission of Survey		

Ireland 10116	2	Ordnance Survey Ireland		
Israel 10046	2	Israeli Society of Photogrammetry & Remote Sensing	Ammatzia Peled Tal Geah Weizman	in person
Italy 10047	6	Societa' Italiana di Fotogrammetria e Topografia	Andrea Lingua Andrea Masiero Enrico Borgogno Mondino (for AsM AIT)	in person
Japan 10048	7	Japan Society of Photogrammetry & Remote Sensing	Kohei Cho Mitsunori Yoshimura Takashi Fuse	virtual
Jordan 10049	4	Royal Jordanian Geographic Centre		
Kenya 10050	1	Kenya Nat'l Committee for Photogrammetry & Remote Sensing		
Korea 10051	2	Korean Society of Surveying, Geodesy, Photogrammetry and Cartography	Byung Gil Lee Woosug Chu Jae Hyun Kwon Myung-Hee JO	in person
Kuwait 10052	2	Directorate of Survey Department - Kuwait Municipality		
Latvia 10053	1	Latvian Society of Geodesy & Photogrammetry		
Libya 10055	1	Surveying Department of Libya		
Lithuania 10056	1	Lithuanian Committee for Photogrammetry & Remote Sensing		
Malawi 10058	2	Surveys Department Malawi		
Malaysia 10059	2	Department of Survey & Mapping Malaysia (JUPEM)		
Mexico 10060	2	National Institute of Statistics and Geography (INEGI)	Mr. Gerardo Esparza Mrs. Eva Luévano Mr. Héctor Aguayo	in person virtual virtual
Mongolia 10061	1	Mongolian Nat'l Society for Photogrammetry & Remote Sensing	Dr. M.Saandari J.Gurragchaa Dr. B.Bayartungalag	virtual
Morocco 10062	3	Agence Nationale de la Conservation fonciere de Cadastre et de la Cartographie	Zineb DIDOUZ Ilyas AFA	in person
Myanmar 10063	2	Myanmar Survey Department	Kyaw Sann Oo Tin Aung Moe Dr. Moe Myint	virtual
Namibia 10064	1	Directorate of Survey & Mapping, Ministry of Lands and Resettlement		
Nepal 10065	1	Nepal Remote Sensing and Photogrammetric Society	Ms Laxmi Thapa	in person

Netherlands 10066	4	Geo-Information Netherlands	George Vosselman Roderik Lindenbergh Francesco Nex	in person
New Zealand 10067	2	Land Information New Zealand		
Nigeria 10105	1	Geoinformation Society of Nigeria		
Norway 10069	3	GeoForum		
Oman 10114	1	National Survey Authority, Ministry of Defence		
Pakistan 10070	1	Survey of Pakistan		
Peru 10071	1	Direccion General de Aerofotografia		
Philippines 10072	1	Philippine Geosciences and Remote Sensing Society		
Poland 10073	3	Polish Society for Photogrammetry and Remote Sensing	Dr. Krzysztof Bakula Aleksandra Bujakiewicz Prof. Zdzisław Kurczyński	in person virtual in person
Portugal 10109	2	Direção Geral do Território		
Qatar 10075	1	Qatar Center for GIS		
Romania 10076	2	Romanian Society for Photogrammetry & Remote Sensing	Prof. Alexandru BADEA Prof. Octavian BALOTA Eng. Daniel ILIE	in person
Russian Federation 10077	8	Federal Service of State Registration, Cadastre and Cartography (Rosreestr)	Andrey Muhkin Valentina Radke Galina Kirichenko	virtual
Saudi Arabia 10078	4	General Authority for Survey & Geospatial Information	Mohammad Almabrook Abdullah Alsultan Raej Alharbi Ali Alahmari	in person
Senegal 10108	1	Centre de Suivi Ecologique		
Slovak Republic 10079	2	Slovak Society for Photogrammetry and Remote Sensing	Katarína Pukanská Karol Bartos	in person
Slovenia 10080	1	Association of Slovenia Surveyors - Section of Photogrammetry & Remote Sensing	Mr. Bujar Fetai Mr. Matej Račič	in person
South Africa 10111	3	South African Society for Photogrammetry and Remote Sensing	Serena Coetzee	in person
Spain 10082	3	Spanish Society of Cartography, Photogrammetry & Remote Sensing (SECFT)		

Sri Lanka 10083	3	Survey Department of Sri Lanka		
Sweden 10086	5	Kartografiska Sällskapet - Swedish Cartographic Society		
Switzerland 10087	4	Swiss Society of Photogrammetry and Remote Sensing	Stefan Blaser Manuela Ammann Manos Baltsavias	in person
Syria 10088	3	General Establishment of Surveying		
Tanzania 10089	1	Ministry of Lands & Human Settlements Development		
Thailand 10090	2	Royal Thai Survey Department		
Turkey 10092	4	Turkish National Society of Photogrammetry and Remote Sensing	Veysel Okan ATAK Orhan FIRAT Levent İŞCAN	virtual
Ukraine 10094	3	Ukrainian Society of Photogrammetry and Remote Sensing	Lyubov Babi Oleksandr Dorozhynskyy Borys Chetverikov	virtual
United Arab Emirates tbc	6	Federal Geographic information Center	Hamad Al Mutawa Anwaar Al Shimmari Bakhita Al Remeithi	virtual
United Kingdom 10093	6	Remote Sensing and Photogrammetry Society	Ian Dowman Paul Newby Jon Mills	in person
Uruguay 10096	1	Instituto Geográfico Militar	Col. Juan J. Croquis	virtual
USA 10097	8	ASPRS	Marguerite Madden Stewart Walker Bandana Kar	in person
Uzbekistan 10110	2	Center of Remote Sensing and GIS Technologies		
Venezuela 10098	2	Instituto Geografico de Venezuela Simon Bolivar		
Vietnam 10099	1	Vietnam Academy of Science and Technology, Institute of Geography	Nguyen Dinh Duong	virtual
Zimbabwe 10106	1	Survey Institute of Zimbabwe		

AGENDA OF ISPRS GENERAL ASSEMBLIES**XXIV ISPRS Congress, Nice 2022****GA I: Monday, 6 June 2022, 10:00 – 16:00**

- 1 Opening Address
- 2 Certification of Delegate credentials,
Explanation and Confirmation of Voting
Rights, Obituaries
- 3 Approval of Agenda
- 4 Approval of new Fellows (by acclamation)
- 5 Admission of new Members
- 6 Ratification of Council Agreements, MoU
- 7 Member proposals to host Commissions
2022-2026
 - 7.1.1 Com I – China/Brazil
 - 7.2.1 Com II – China/Finland
 - 7.2.2 Com II – USA/Switzerland
 Coffee/Tea break
 - 7.3.1 Com III – France/Brazil
 - 7.3.2 Com III – Indian/Turkey
 - 7.4.1 Com IV – Australia/Italy
 - 7.5.1 Com V – Philippines/USA
- 8 Election of Members to host Commissions
2022-2026
- 9 Announcement of results of Tech
Commission Elections
- 10 Member proposals to host ISPRS Congress
in 2026
 - 10.1 Candidate 1 - Canada
 - 10.2 Candidate 2 - China
 - 10.3 Candidate 3 - Korea

GA II: Wednesday, 8 June 2022, 9.00 - 18.00

- 11 Report of Council
 - 11.1 Report of the President
 - 11.2 Report of the Secretary General
 - 11.4 Report of the Treasurer
- 12 Report of the Financial Commission
- 13 Nominations for Financial Commission
2022-2026 **postponed to Friday**
- 14 Election and announcement of three
Financial Commission Members **postponed
to Friday**
- 15 Report from the Regional
Representatives/Coordinator
 - 15.1 Africa
 - 15.2 South-East Asia
 - 15.3 Latin America
 - 15.4 Arab States
- 16 Council's proposal and confirmation of
2022-2026 Regional Representatives by GA
- 17 Nominations for Council
 - 17.1 Election of President
 - 17.2 Election of Secretary General
 - 17.3 Election/Appointment of Past
President
 - 17.4 Election of Vice President

- 17.5 Election of Treasurer
 - 18 Nominations for 2026 Fellow Committee
members **postponed to Friday**
Approval of the Fellow Committee
Members **postponed to Friday**
 - 19 Proposal and Discussion of Amendments
to Statutes and Bylaws **postponed to
Friday**
 - 11.3 Proposal for Amendments to Statutes
& Bylaws **postponed to Friday**
Discussion about Amendments to Statutes
& Bylaws **postponed to Friday**
 - 20 Decision on Amendments to Statutes and
Bylaws **postponed to Friday**
 - 21 Membership
 - 21.1 Membership Development
 - 21.2 Member Correspondence to Council
 - 22 Report on The ISPRS Foundation (TIF)
 - 23 Report on Website
 - 24 Student Consortium
 - 25 Report on ISPRS Journals
 - 25.1 Report on IJPRS
 - 25.2. Report on IJ-GI
 - 25.3. Report on ISPRS Open JPRS
- GA II: 9.00-18.00

GA III: Friday, 10 June 2022, 9.00 - 18:00

- 26 Reports from ISPRS Committees
 - 26.1 ISAC
 - 26.2 IPAC Report
 - 26.3 IIAC
 - 26.4 ICORSE
 - 26.5 CIPA
- 18 Fellows Committee Election
- 13 Nominations for Financial Commission
2022-2026
- 14 Election and announcement of three
Financial Commission Members
- 19 Proposal and Discussion of Amendments
to Statutes and Bylaws
- 20 Decision on Amendments to Statutes and
Bylaws
- 27 Election of Member to Host the ISPRS
Congress in 2026
- 30 Announcement of the 2026 Congress Host
- 33 Evaluation of TC restructuring
- 34 Evaluation of Scientific and Capacity
Building Initiative
- 35 Presentation of Resolutions
- 29 GSW 2023 Report
- 37 Congress Director's Report
- 38 Date of the next General Assembly
- 39 Any other Business
- 40 Close of General Assembly

Decisions of the General Assembly

The General Assembly:

Approved the Agenda

The General Assembly:

Approved the appointment of the following Fellows:

- Kohei Cho (Japan)
- Songnian Li (Canada)
- Marguerite Madden (USA)
- Charles K. Toth (USA)
- George Vosselman (The Netherlands)
- Jon Mills (UK)

Sisi Zlatanova (Australia)

The General Assembly:

Approved the following changes in membership during Congress:

Admission of 2 new Ordinary Members:

- SELPER – Brazil - Cat. 4
- Federal Geographic Information Center, UAE – Cat. 6

2 Ordinary Member category changes:

- GASGI, Saudi Arabia - category 4 to 6
- Korean Society of Surveying, Geodesy, Photogrammetry and Cartography – Cat. 2 to 6

The General Assembly:

Ratified changes to MoUs and Contracts:

MOUs – new agreements with professional organisations:

- 3S (MIIGAIK, SSUGT, Tongji, Wuhan Universities)
- OSGeo - Open Source Geospatial Foundation
- SELPER - Sociedad Latinoamericana en Percepción Remota y Sistemas de Información Espacial
- IAA - International Academy of Astronautics
- IEEE - Geoscience and Remote Sensing Society
- OGC - Open Geospatial Consortium Inc.

Seven contracts have been signed:

- MDPI, Amendment III to the Journal Publishing Agreement from 8 August 2011
- MDPI, Amendment IV to the Journal Publishing Agreement from 8 August 2011
- MDPI, Amendment V to the Journal Publishing Agreement from 8 August 2011
- Elsevier BV, Data Protection Addendum, 5 April 2018
- Elsevier BV, Journal Publishing Agreement for Open Access Journals, 10 November 2020
- Elsevier BV, Journal Publishing Agreement for Hybrid Journals, 10 November 2020
- Copernicus GmbH, Publishing Agreement for Archives and Annals, 17 June 2020
- TIB Agreement – CC License, 19 November 2020
- TIB First Addendum to Archive and Distribution Agreement of 21 May 2014, 9 December 2020
- Dan Brooking-Coker - Agreement for ISPRS Treasurer Assistant, 1 January 2018 – 31 December 2020, extended to 2022
- Gang Chen - Assoc. Editor IJPRS, 1 February 2018 – 31 January 2019
- Vasisht Sagan - Assoc. Editor IJPRS, 1 February 2018 – 31 January 2019
- Roderik Lindenbergh - Assoc. Editor IJPRS, 1 February 2018 – 31 January 2019
- Marco Scaioni - Assoc. Editor IJPRS 1 February 2018 – 31 January 2019
- Tuia Devis - Assoc. Editor IJPRS, 1 April 2018 – 31 March 2019
- CliftonLarsonAllen LLP Statement of Work – Tax Exempt Returns and State Filings, 5 February 2021

The General Assembly:

Elected the following Members to host Technical Commissions:

- TC I: China/Brazil
- TC II: USA/Switzerland
- TC III: France/Brazil
- TC IV: Australia/Italy
- TC V: Philippines/USA

The General Assembly:

Ratified the appointment of:

Derek Lichti (Canada) as the Congress Director
Christian Heipke (Germany) as Past President

The General Assembly:

Elected the following Members of Council:

Lena Halounová (Czech Republic) as President
JIANG Jie (China) as Secretary General
Nicolas Paparoditis (France) as Vice President
Stewart Walker (USA) as Treasurer

The General Assembly:

Elected as Members of the Financial Commission:

A Senthil Kumar (India)
Petri Rönholm (Finland)
Andrea Masiero (Italy)

The General Assembly:

Elected as members of the Fellows Committee:

Manos Baltsavias (Switzerland)
Marguerite Madden (USA)
Kohei Cho (Japan)
John Mills (UK)

The General Assembly:

Elected the following as Regional Representatives to Council:

Africa: André Nonguierma

Asia: Shailesh Nayak

Latin-America: Raul Queiroz Feitosa, and Regional Vice-Representative: Jaime Hernandez

Arab States: Mohammed Yahya Al Sayel, and Regional Vice-Representative: Abdalla Alobeid

The General Assembly:

Ratified the amendments to the Status and Bylaws

The General Assembly:

Approved of the Resolutions of the Congress

MINUTES OF GENERAL ASSEMBLIES

GA I: Monday June 6, 2022, 10.10 - 16.00

Opening Address

ISPRS President Christian Heipke opened the meeting at 10:10am and welcomed the delegates, attending both in person and via Zoom, to the General Assembly.

The Chinese OdM and delegates greeted the Assembly and were welcomed via a video link.

A minute's silence was held in remembrance of those ISPRS persons deceased in the past term.

Certification of Delegate Credentials, Explanation and Confirmation of Voting Rights

ISPRS Secretary General Lena Halounová explained the voting procedure to delegates.

Approval of Agenda

The agenda was approved.

Approval of new Fellows

The new fellows, Kohei Cho (JP), Songnian Li (CA), Marguerite Madden (USA), Charles K. Toth (USA), George Vosselman (NL), Jon Mills (UK) and Sisi Zlatanova (AUS), were approved by acclamation.

Jon Mills received his Fellowship silver plate and certificate as he will not be present at the handing over ceremony.

Admission of new Members

The new Ordinary members, for Brazil: SELPER Capítulo Brasil (Sociedade Latinoamericana en Percepción Remota y Sistemas de Información Espacial), and for United Arab Emirates: Federal Geographic Information Center, were approved by acclamation.

Ratification of Council Agreements, MoU

Council agreements and MoUs were approved by ratification.

Member Proposals to host Commissions 2022-2026

The following members presented proposals to host the respective commissions:

1.1 Commission I - Sensor Systems

Chinese Society for Geodesy Photogrammetry and Cartography

Proposed President: TANG Xinming, Land Satellite Remote Sensing Application Center, Ministry of Natural Resources of the People's Republic of China

Proposed Vice-president: Antonio Maria Garcia Tommaselli, São Paulo State University, Brazil

Proposed Secretary: ZHANG Tao, Land Satellite Remote Sensing Application Center, Ministry of Natural Resources of the People's Republic of China

7.2 Commission II – Photogrammetry

7.2.1. Chinese Society for Geodesy Photogrammetry and Cartography

Proposed President: YANG Bisheng, Wuhan University, China

Proposed Vice-president: Hyyppä Juha, Finnish Geospatial Research Institute, Finland

Proposed Secretary: CHEN Chi, Wuhan University, China

7.2.2 American Society for Photogrammetry and Remote Sensing

Proposed President: Alper Yilmaz, The Ohio State University, USA

Proposed Vice-president: Jan Dirk Wegner, ETH Zürich, Switzerland

Proposed Secretary: Rongjun Qin, The Ohio State University, USA

1.3 Commission III - Remote Sensing

7.3.1 Indian Society of Remote Sensing

Proposed President: Prakash Chauhan, National Remote Sensing Centre, ISRO, Hyderabad

Proposed Vice-president: Sultan Kocaman, Hacettepe University, Ankara, Turkey

Proposed Secretary: Sameer Saran, Indian Institute of Remote Sensing, Indian Space Research Organisation

7.3.2 Société Française de Photogrammétrie et de Télédétection

Proposed President: Laurent Polidori, Universidade Federal do Pará, Brazil, and Centre d'Etudes Spatiales de la Biosphère, France

Proposed Vice-president: Alessandra Gomes, Instituto Nacional de Pesquisas Espaciais, Brazil

Proposed Secretary: Jean-François Faure, Institute of Research for Development, France

7.4 Commission IV - Spatial Information Systems

Surveying and Spatial Sciences Institute, Australia

Proposed President: Sisi Zlatanova, University of New South Wales, Sydney, Australia

Proposed Vice-president: Maria Antonia Brovelli, Politecnico di Milano, Italy

Proposed Secretary: Hao Wu, National Geomatics Center of China, Beijing, China

1.5 Commission V - Education and Outreach

Philippine Geosciences and Remote Sensing Society

Proposed President: Gay Jane Perez, Philippine Space Agency, Philippines

Proposed Vice-president: Josefino Comiso, NASA Goddard Space Flight Center, USA

Proposed Secretary: Ayin Tamondong, University of the Philippines, Diliman, Philippines

Election of Members to host Commissions 2022-2026

The elections were held online using the SimplyVoting software.

Announcement of Results of Technical Commission Elections

As there was only one application for Commissions I, IV and V, the candidates were voted in by acclamation.

The results of the elections were:

Com. I - Sensor Systems: China / Brazil

Com. II - Photogrammetry : USA /Switzerland
(118 out of 142)

Com. III - Remote Sensing: France / Brazil
(102 out of 150)

Com. IV - Spatial Information Science: Australia / Italy

Com. V - Education and Outreach: Philippines / USA

Member Proposals to host ISPRS Congress in 2026

The following proposals were presented:

Candidate 1 – Canada, by Derek Lichti

Candidate 2 - China, by Huayi Wu

Candidate 3 – Korea, by Woosug Cho

The General Assembly closed at 16:00

GA II: Wednesday, June 8 2022, 9.00 - 18.00

Report of Council (all written reports were sent to members prior to GA)

The following reports were presented:

Report of the President, by Christian Heipke

Report of the Secretary General, by Lena Halounová

Report of the Treasurer, by Songnian Li

Report of the Financial Commission

George Vosselman reported on the findings of the Financial Commission. The ten recommendations to the Treasurer and Council can be found in the report submitted to the GA.

Nominations for Financial Commission 2022-2026

The following proposals for members of the Financial Commission were made:

Finish OdM proposal: Petri Rönholm

Italian OdM proposal: Andrea Masiero

Council proposal: Senthil Kumar

Election and Announcement of three Financial Commission Members

The following Commission members were elected by the General Assembly by acclamation:

Chair: Senthil Kumar

Member: Petri Rönholm

Member: Andrea Masiero

Reports from the Regional Representatives/Coordinator (all written reports were sent to members prior to GA)

Reports from the following representatives were given:

Africa, by Hussein Farah, remote

Asia, by Shailesh Nayak, remote

Latin America, by Mario Hernandez

Arab States, by Mohammad Almabrook, on behalf of Mohammed Yahya M. Al Sayel

It was reported that the Syrian OdM, General Establishment of Surveying, does not exist any longer.

Council's Proposal and Confirmation of 2022-2026 Regional Representatives by GA

The following representatives were approved by the GA:

Africa

Regional Representative: André Nonguierma, UN Economic Commission for Africa, Addis Ababa, ETHIOPIA

Asia

Regional Representative: Shailesh Nayak, National Institute of Advanced Studies, Indian Institute of Science Campus, INDIA

Latin America

Regional Representative: Raul Queiroz Feitosa, Pontifical Catholic University of Rio de Janeiro, BRAZIL

Regional Vice-Representative: Jaime Hernandez, Universidad de Chile, CHILE

Arab States

Regional Representative: Mohammed Yahya Al Sayel, President of General Authority for Survey and Geospatial Information, SAUDI ARABIA

Regional Vice-Representative: Abdalla Alobeid, Royal Commission for Riyadh City (RCRC) & General Authority for Survey & Geospatial Information, SAUDI ARABIA

Nominations for Council

President: Lena Halounová

Secretary General: Jie JIANG

Vice-President: Nicolas Paparoditis

Treasurer: Stewart Walker

1.1 Election of President

Lena Halounová was elected as President for the term 2022-2026.

1.2 Election of Secretary General

Jie JIANG was elected as Secretary General for the term 2022-2026.

Election/Appointment of Past President

Christian Heipke was appointed Past President for the term 2022-2026.

Election of Vice President

Nicolas Paparoditis was elected as Vice-President for the term 2022-2026.

Election of Treasurer

Stewart Walker was elected as Treasurer for the term 2022-2026.

Fellows Committee

The following proposals were made for members of the Fellows Committee for 2026:

Swiss OdM proposal: Manos Baltsavias

Stewart Walker proposal: Marguerite Madden

Council proposal: Kohei Cho and Jon Mills

The proposals were approved by acclamation.

Discussion and Decision about Changes of Statutes & Bylaws

Proposals about changes of Statutes & Bylaws were discussed. It was decided to continue the discussion after a new written proposal from Switzerland had been submitted.

Following detailed discussion based on a revised proposal, which included suggestions from Council and GA members, each amendment to the Statutes and Bylaws of that new proposal was then put to vote and was approved by acclamation.

The president thanked Manos Baltsavias for his detailed work in revising and proposing the amendments.

Membership Development

1.1 Statistics

Current Status of ISPRS Members

Cat.	1	2	3	4	5	6	7	8	A	B	C	D	E	Total
OdM	31	24	14	7	3	6	1	5						91
AsM	11	1												12
RgM														14
StM									5	7	12	21	13	58

Ordinary Members

There are currently 91 Ordinary Members.

New Ordinary Members

The following 5 Ordinary Members have been admitted since the Prague Congress:

ID	Name	Country	Cat.	Date
10114	National Survey Authority, Ministry of Defence	Oman	1	14.07.2016
10115	Instituto Geográfico Nacional	Argentina	2	08.03.2017
10116	Ordnance Survey Ireland	Ireland	2	06.03.2018
10117	Canadian Remote Sensing Society	Canada	5	08.05.2018
10118	Instituto Nacional de Pesquisas Espaciais	Brazil	4	14.04.2020
10120	SELPER Capítulo Brasil	Brazil	4	during Congress
10121	Federal Geographic Information Center	UAE	6	during Congress

Discontinued Ordinary Members

The following 6 Ordinary Members have cancelled membership since the Prague Congress:

ID	Name	Country	Cat.	Date
10003*	Argentine Association for Photogrammetry & Related Sciences	Argentina	2	08.03.2017
10045*	Irish Society of Surveying, Photogrammetry & Remote Sensing	Ireland	2	05.03.2018
10018	Canadian Institute of Geomatics	Canada	8	08.05.2018
10013	Brazilian Society of Cartography - Sociedade Brasileira de Cartografia	Brazil	5	22.03.2019
10118	Instituto Nacional de Pesquisas Espaciais	Brazil	4	20.04.2022
10095	Remote Sensing Center - Fac. of Science - Geology Dept., UAE University	UAE	6	27.04.2022
10088*	General Establishment of Surveying	Syria		During Congress, as reported by Regional Rep. of the Arab States

*No longer exists

Change of Ordinary Member Category

The following Ordinary Member requested a change of category since the Prague Congress:

ID	Name	Country	Cat.	Date
10041	Indian Society of Remote Sensing	India	6 to 8	12.01.2017
10078	General Authority for Survey & Geospatial Information	Saudi Arabia	4 to 6	During Congress
10051	Korean Society of Surveying, Geodesy, Photogrammetry and Cartography	Korea	2 to 6	During Congress

Associate Members

There are currently 12 Associate Members.

New Associate Members

Two Associate Members have been admitted since the Prague Congress:

ID	Name	Country	Cat.	Date
20022	IEEE/GRSS Brazil Chapter	Brazil	1	20.11.2018
20023	Azercosmos OJSCo.	Azerbaijan	1	28.07.2020

Discontinued Associate Members

The following 5 Associate Members have cancelled membership since the Prague Congress:

ID	Name	Country	Cat.	Cancellation Date
20015*	Chinese-Taipei Geoinformatics Society	Chinese-Taipei	1	20.09.2018
20018	Servicio Aerofotogramétrico – Fuerza Aérea de Chile	Chile	2	02.10.2020
20010*	Society for Contributing Development of Photogrammetry and Remote Sensing	Russian Federation	2	01.02.2021
20014*	Centre Royal de Teledetection Spatiale	Morocco	1	01.02.2021
20006*	Korean Society for Geo-Spatial Info Systems	Korea	1	15.12.2021

*No longer exists

Change of Associate Member Category

The following Associate Member requested a change of category since the Prague Congress:

ID	Name	Country	Cat.	Change Date
20005	Associazione Italiana di Telerilevamento – AIT	Italy	3 to 1	12.07.2016

Regional Members

There are currently 14 Regional Members.

New Regional Members

The following Regional Member has been admitted since the Prague Congress:

ID	Name	Country	Cat.	Membership Date
30018	Pacific GIS and Remote Sensing Council	Fiji	1	20.08.2018

Discontinued Regional Members

The following 3 Regional Members have cancelled membership since the Prague Congress:

ID	Name	Country	Cat.	Cancellation Date
30009	Secretariat of the Pacific Islands Community - Geoscience Division	Fiji	1	20.08.2018
30017	Association of Geographic Information Laboratories in Europe	Netherlands	1	04.04.2019
30005*	African Association of Cartography & Remote Sensing – OACT	Algeria	1	15.12.2021

*No longer exists

Sustaining Members

There are currently 58 Sustaining Members.

New Sustaining Members

The following 21 Sustaining Members have been admitted since the Prague Congress:

ID	Name	Country	Cat.	Membership Date
40128	Teledyne Optech Incorporated	Canada	B	04.07.2016
40129	Good Shepherd Engineering	Palestine	D	12.07.2016
40130	Brilliant Remote Sensing Labs	Egypt	E	15.05.2017
40131	Phase One Industrial	Denmark	C	03.08.2017
40132	nFrames GmbH	Germany	D	02.08.2017
40133	Leador Spatial Information Technology Corporation	China	C	01.01.2018
40134	Beijing University of Civil Engineering & Architecture, School of Geomatics and Urban Spatial Informatics	China	E	30.03.2018
40135	University of Novi Sad, Faculty of Technical Science, Geoinformatics Laboratory	Serbia	E	15.05.2018

40136	GeoCloud	Israel	D	17.09.2018
40137	Mohammed Bin Rashid Space Centre	UAE	C	12.11.2018
40138	PhotoGAUGE Inc.	USA	D	07.12.2018
40139	GGs - Geotechnik, Geoinformatik & Service GmbH	Germany	D	21.03.2019
40140	HySpex, Norsk Elektro Optikk	Norway	D	15.10.2019
40141	Beijing PIESAT Information Technology	China	C	25.10.2019
40142	Geoscience & Digital Earth Centre INSTeG, Universiti Teknologi Malaysia	Malaysia	E	14.11.2019
40143	MilGAiK	Russian Federation	E	15.02.2020
40144	DGLinks Limited	Nigeria	D	11.12.2019
40145	Survey World	Botswana	D	05.08.2020
40146	Geomakani	Egypt	D	08.09.2020
40147	Bayanat for Mapping and Surveying Services LLC	Dubai	B	10.09.2020
40148	Global Mapping	Peru	D	28.09.2020
40122	Airbus	France	B	during Congress

Discontinued Sustaining Members

The following 18 Sustaining Members have cancelled membership since the Prague Congress (and one

member prior to that Congress) or have been expelled by Council for lack of membership payment:

ID	Name	Country	Cat.	Cancellation Date
40090	Infoterra GmbH	Germany	C	17.04.2013
40067	Yildiz Technical University	Turkey	E	29.09.2017
40114	Vietnam Association of Geodesy, Cartography and Remote Sensing	Vietnam	E	29.09.2017
40062	Hansa Luftbild	Germany	D	31.12.2017
40128	Teledyne Optech Incorporated	Canada	B	31.12.2017
40078	Earth Data Analysis Center	USA	E	26.03.2018
40126	Foxel SA	Switzerland	D	22.10.2018
40082	Newcastle University, School of Engineering	UK	E	05.11.2018
40107	Lead'Air Inc.	Netherlands	D	27.11.2018
40068	University Teknologi Malaysia	Malaysia	E	21.01.2019
40121	University of Haifa, Center for Spatial Information Systems Research	Israel	E	14.02.2019
40125	VisionMap	Israel	B	18.04.2019
40001	Adam Technology	Australia	D	20.01.2020
40021	Instituto Nacional de Pesquisas Espaciais	Brazil	C	14.04.2020
40089	Geometral	Portugal	C	30.04.2021
40132	nFrames GmbH	Germany	D	15.02.2021
40100	Ramani Geosystems	Kenya	D	28.02.2022
40111	Airborne Hydrography AB	Sweden	D	28.02.2022
40117	Extensis (was LizardTech)	USA	D	12.04.2022

Change of Sustaining Member Category

The following Sustaining Member requested a change of category since the Prague Congress:

ID	Name	Country	Cat.	Change Date
40022	Trimble	USA	D to B	01.01.2018

1.2 Member Correspondence to Council**1.3 Based on the request of various OdMs, an intense discussion was held regarding the ISPRS membership of those members with connections to the ongoing Russian invasion of the Ukraine.**

After a number of statements, Swiss representative, Manos Baltsavias proposed to vote on whether to continue the discussion. Orhan Altan (Turkey) seconded the motion.

The GA voted against continuing the discussion with 98 no and 13 yes.

Orhan Altan then proposed that the ISPRS General Assembly endorse the statement published by ISPRS Council on the ISPRS website on 3 March 2022 in regard to the Russian invasion of the Ukraine. The proposal was endorsed per acclamation; the item was then closed.

Report on The ISPRS Foundation (TIF), by Stewart Walker

In his report, Stewart Walker particularly thanked IRD France for funding registration waivers to attend the Congress.

Report on Website, by Markus English**Student Consortium, by Sheryl Rose Reyes****Report on ISPRS Journals****25.1 Report on IJPRS, by Clément Mallet****25.2 Report on IJ-GI, Wolfgang Kainz****25.3 Report on ISPRS Open JPRS, George Vosselman**

The GA closed at 18:00.

(All written reports were sent to members prior to GA.)

GA III: Friday, June 10 2022, 9.00- 18:00**Greetings from Japan**

Shunji Murai greeted the GA via remote connection and expressed his best wishes to the community on behalf of the Asian Association of Remote Sensing.

Reports from ISPRS Committees (all written reports were sent to members prior to GA)**1.4 ISAC, by Ian Dowman****1.5 IPAC Report, by Gunter Schreier****1.6 1.3 IZAC Report, by Hartmut Rosengarten**

It was noted that collaboration between ISPRS and industry needs to be strengthened.

1.4 ICORSE, by Mark Doherty on behalf of Mary Ann Kutny**1.5 CIPA, by Stratos Stylianidis, (remote)****Election of Member to Host the ISPRS Congress in 2026**

The election was held using SimplyVoting software online.

Presentation on 2023 GSW in Egypt

2023 GSW Director, Naser El-Sheimy presented the preparation status of the coming event which will take place in Cairo, Egypt, from 2-7 September 2023.

ISPRS President Christian Heipke and Naser El-Sheimy signed the contract between ISPRS and the GSW organisers.

Announcement of the 2026 Congress Host

Canada was elected to host the 2026 Congress in Toronto.

Canada	96 votes	66,2%
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China	16 votes	10,8%
Korea	34 votes	23%

Ratification of the 2026 Congress Director

Derek Lichti was ratified as Congress Director.

Presentation of the 2026 Congress Director

Derek Lichti presented his vision for the XXV ISPRS Congress in 2026.

Evaluation of TC Restructuring

ISAC Chair, Ian Dowman reported on the evaluation from ISAC of the restructuring of the Technical Commissions made in 2016, from 8 to 5 commissions.

The complete evaluation was submitted to members prior to the GA.

Evaluation of Scientific and Capacity Building Initiative

ISAC Chair, Ian Dowman reported on the evaluation from ISAC on the Scientific, and the Education and Capacity Building Initiatives.

The complete evaluation was submitted to members prior to the GA.

Presentation of Resolutions

The resolutions were presented and discussed.

Approval of Resolutions for 2022-2026

The resolutions were approved by acclamation.

2022 Congress Director's Report

Congress Director, Nicolas Paparoditis reported on the three XXIV Congress events with statistics, innovations and some recommendations for the future.

Date of the next General Assembly

The dates of the next GA will be between 4-11 July 2026.

Any other Business

George Vosselman requested that the GA be shortened in future.

Close of General Assembly

The assembly closed at 17:35.

Report of ISPRS President Christian Heipke to the General Assembly for the Term 2016-2022

Distinguished Delegates, Ladies and Gentlemen,

It is my great pleasure to present to you my report on the activities of the ISPRS. This report covers the activities of ISPRS Council, and in particular my own activities, between the XXIII Congress in Prague in 2016 and the physical edition of the XXIV Congress in Nice in 2022. During this period, efforts were undertaken by all ISPRS officers to strengthen the scientific leadership of ISPRS, to develop new and relevant services for our members, and to more closely cooperate with our sister societies in order to serve the society at large with not only geospatial *Information from Images*, but also from other sources, and to make the world a better place. As the pandemic struck in early 2020, an additional task was to keep the community together and to provide help to those ISPRS members who needed it.

ISPRS, www.isprs.org, is an international non-governmental organization promoting international cooperation between worldwide organizations with interests in the photogrammetry, remote sensing and spatial information sciences. As the oldest international umbrella organization in its field, it is summarized as “information from imagery”.

ISPRS achieves its aims by:

- Advancing knowledge in the areas of interest of ISPRS by encouraging and facilitating research and development, scientific networking and interdisciplinary activities;
- Facilitating education and training with particular emphasis in less developed countries;
- Promoting public recognition of the contributions of the photogrammetry, remote sensing and spatial information sciences for the benefit of humankind and the sustainability of the environment.

The ISPRS scientific and technical programs are organized by five Technical Commissions. The five Technical Commissions have established about 60 Working Groups which are responsible for particular topics within the Commissions’ areas of interest.

The ISPRS Student Consortium is an independent body associated to ISPRS and forms the next generation of leaders in the fields related to ISPRS. TIF, the ISPRS Foundation is funded through donations, and supports in particular young scientists who can otherwise not attend ISPRS events.

After the commission restructuring process between 2012 and 2016, the inter-Congress period between 2016 and 2022 was the first to feature five Commissions, entitled *Sensor Systems*,

Photogrammetry, Remote Sensing, Spatial Information Science and *Education and Outreach*, respectively. At the same time, next to the positions of Commission Presidents, Vice-presidents had been introduced in 2016 for the first time. Four of the five Commissions have filled these two positions with candidates from Ordinary Members coming from different continents, which significantly increased the mutual understanding and the level of cooperation.

I would like to note here that leading the Society was significantly facilitated by a generous grant from the German Science Foundation, DFG (Deutsche Forschungsgemeinschaft), and was excellently supported by Annette Radtke. Both, the DFG support and Annette's invaluable work are gratefully acknowledged.

Scientific Leadership – Events and Publications

The most visible ISPRS activities are scientific meetings and scientific publications. All five Technical Commissions held very successful **Symposia** in 2018, other major events were the **ISPRS Geospatial Weeks** in Wuhan, China, in September 2017, under the leadership of Li Deren, and in Enschede, The Netherlands, in June 2019, organised by George Vosselman and his team. In addition, a large number of **workshops** and smaller events were organised, mainly by the ISPRS working groups, and sometimes in conjunction with non-ISPRS groups. After the start of the pandemic, many of these meetings were organised as virtual events, while others were cancelled.

As a side effect of some of the working group activities, an increasing amount of **benchmark data** can now be accessed through the ISPRS web site free of charge. A prime example is the ISPRS Semantic Labelling Contest, with hundreds of participants, which was very well received not only within our community, but also in our neighbouring disciplines, in particular in computer vision.

Publications

The main scientific outlets of ISPRS are the journals and the proceedings. The **ISPRS Journal of Photogrammetry and Remote Sensing** saw an enormous growth in the number of published papers as well as in the impact factor, which went up to 8.979 in 2020, ranking first in physical geography, first in photogrammetry and second in remote sensing. The Editors-in Chief, Derek Lichti and Qihao Weng significantly contributed to this success. The same is true for Clément Mallet, who succeeded Derek Lichti in 2021.

The new **ISPRS Open Journal of Photogrammetry and Remote Sensing** started in 2021 with George Vosselman as Editor-in-Chief, and is considered the sister journal of the ISPRS JP&RS. The journal has made first inroads into the field and is beginning to establish itself as a strong scientific voice in the open access area.

Under the leadership of Editor-in-Chief Wolfgang Kainz, the **ISPRS International Journal of Geo-Information**, another open access journal, has seen a similar growth in published papers and impact factor, standing at 2,899 in 2020. Two major changes were introduced during the last few years: ESRI, together with the publisher MDPI established the Jack Dangermond Award for the best paper published in the journal in the inter-Congress period. The first awardees, announced in 2020, are Florent Poux and Roland Billen, University of Liège, for their paper *Voxel-based 3D Point Cloud Semantic Segmentation: Unsupervised Geometric and Relationship Featuring vs Deep Learning Methods*. The second new development is the addition of a Board of Associate Editors, established in 2021, to further increase the quality of the review process and of the publications.

With the aim to publish special issues for the 2020 Congress, the two journals, under the leadership of Charles Toth and Songnian Li, prepared an issue entitled Data Analytics: Meeting the challenges of Big Geo Data (ISPRS Journal of Photogrammetry and Remote Sensing, <https://www.sciencedirect.com/journal/isprs-journal-of-photogrammetry-and-remote-sensing/special-issue/10S3F3M57S9>) and State-of-the-art in Spatial Information Systems (ISPRS International Journal of Geo-Information, https://www.mdpi.com/journal/ijgi/special_issues/ISPRS_2020_Nice). The papers published in these two special issues clearly demonstrate the high level of research done in the ISPRS community and at the same time showcase the breadth of the ISPRS activities.

Both **proceedings series**, the abstract-reviewed Archives and double-blind full-paper reviewed Annals are also open access and are indexed in the Web of Science, SCOPUS, DOAJ and EI. In order to guarantee the originality of the papers, as of 2020, each submission undergoes an automatic plagiarism check prior to publication. Furthermore, efforts to increase the availability of older proceedings have been intensified in conjunction with TIB-LUH (Technische Informationsbibliothek of Leibniz University Hannover) with the result that nearly all Archive volumes are now online at the ISPRS web site.

Finally, a new **preprint policy** was introduced, stipulating that publications in public repositories such as arXiv would not be considered as published work for the review process. Therefore, an arXiv paper does not preclude a publication either as a conference or a journal paper.

Internal society matters and new member services

After the restructuring of the Commissions between 2012 and 2016, which, according to an evaluation of ISAC, the International Science Advisory Committee of ISPRS, was found to be successful, Council looked at its own structure during the last inter-Congress period. **Council restructuring** had the aims to (a) facilitate the organisation of a large ISPRS event in a country without a strong legacy in ISPRS fields and (b) increase flexibility when filling Council positions. Both aims were directed to increase the attractivity of ISPRS and its activities. Restructuring was achieved by amending the Statutes & Bylaws, which now offer (a) the possibility of a Council member to be responsible, together with the Congress or Geospatial Week Director, for a strong scientific programme of the respective meeting, and (b) more diversity when going from one Council position to the next, incl. a maximum of three inter-Congress periods to stay on Council for any individual in order to allow for more people to become involved in ISPRS affairs at Council level.

More diversity was also the aim of the introduction of a new **Regional Coordinator for the Arab States** in early 2017. Muhamad Alrajhi offered his assistance, without the need to be funded, and Council subsequently created this new position. Activities have increased in the region since then, incl. two successful meetings in Saudi Arabia, a number of new members from the area, and a successful bid to organise the Geospatial Week 2023 in Egypt.

Along the same lines, the **ISPRS brochure** was published in **six different languages** (Arabic, Chinese, English, Portuguese, Russian and Spanish) to promote the society and the Nice Congress.

New member services created during 2016 – 2022 include the new Key Note Series, offering support for ISPRS members who wish to invite a senior speaker to their meeting. Local meeting organisers can also profit from support with respect to the management system ConfTool, used throughout the society; the system is now offered free of charge for ISPRS events. In addition, partial funding of APC (Author Processing Charges) in ISPRS open access journals is available for authors of accepted papers who could otherwise not have their research results published.

Finally, the **Scientific Initiative** and the **Educational & Capacity Building Initiative** have regularly been launched in alternate years to encourage cooperation between different groups within ISPRS. Results from the E&CB projects have produced ample educational material which has been made available at the ISPRS web site. Another ISAC evaluation has shown the great potential of these initiatives, and has pointed to a few issues deserving a closer look in order to further improve the schemes.

International cooperation

During the inter-Congress period, the focus of international cooperation was (a) on Latin America, with a number of initiatives, many together with the IEEE Geoscience and Remote Sensing Society (GRSS), (b) a continuation of the strong link to the Asian Association of Remote Sensing (AARS), and (c) increased contact to the IEEE Computer Vision Society (CVS).

In Latin America, a series of yearly summer schools was organised by the IEEE GRSS Young Professionals and the ISPRS Student Consortium. Unfortunately, the common LAGIRS 2020 Conference in Chile had to be cancelled due to the pandemic (see below). Summer schools, together with high level presentations and While Elephant sessions were the main ingredients of the cooperation with AARS. CVS and ISPRS cooperated e.g. in the Earth Vision Workshop, held in conjunction with the IEEE Conference on Computer Vision and Pattern Recognition (CVPR) in the US.

On the more political level, ISPRS participated in the UN GGIM: Geospatial Societies, which had been founded to provide a common GI voice to the United Nations. In this regard, also IPAC, the International Policy Advisory Committee of ISPRS, played a major role; IPAC organised various high-level round table discussions, e.g. during the Com. V Symposium and during UNISPACE 50, both in 2018.

Finally, a number of Memorandums of Understanding were signed to improve partnership between the different societies, e.g. with OSGeo and SELPER (2016), IAA (2017), IEEE GRSS (2018), and OGC (2020).

Consequences of the corona pandemic

And then, disaster struck ...

As is well known, the Congress had to be postponed twice, once on March 26, 2020 and, as the pandemic kept interrupting normal business and travel around the globe, a second time on February 10, 2021. Instead of meeting in-person, ISPRS, like many other organisations, organised two digital editions of the XXIV Congress. These decisions had many consequences, also on the general meeting schedule: The ISPRS Geospatial Week 2021 was first moved to 2022, but then had to be cancelled altogether. The next GSW is now scheduled to be held in Egypt in autumn 2023.

In the view of Council, it is essential that ISPRS members and delegates can meet and exchange ideas in person. Therefore, the digital events did not include any General Assembly: A digital General Assembly in 2020 or 2021 and a next Congress in 2024 would have meant that there would be no large scale physical meeting for a total of 8 years. Council judged the involved risk, namely that by then the ISPRS community might have significantly lost influence or even substantially

disintegrated, as too high. Council also judged it to be very difficult to staff a new set of Commissions, working groups etc., when running a digital-only meeting. As an alternative, the general 4-year period of activities of ISPRS was shifted by two years, and all ISPRS officers were asked to continue serving the society; this request was accepted by the large majority of officers.

Both digital editions came with a complete peer review and publication process, because authors had already submitted papers at the time the meeting was postponed. The 2020 edition saw about 300 scientific presentations selected from nearly 1800 submissions (however the latter number relates to the time before the pandemic; many submissions were withdrawn as a consequence of travel restrictions), and about 1000 papers were published. In 2021, we saw a more diverse programme with key notes, about 300 oral presentations (selected from nearly 700 submissions and over 500 published papers), tutorials, two fora on *Geo and Pandemic* and the *Role of the Youth in Sustainable Development*, a new technology track, award sessions, and also a digital exhibition, which unfortunately did not work as well as hoped. These two events were a new experience in many aspects and offered a leap forward in terms of digitisation of scientific meetings for ISPRS. A benefit of the new technology is the pre-recorded videos, which had been submitted together with the camera-ready manuscripts. ISPRS now provides these videos as an open access addition to the written papers in the new digital media library.

The pandemic also had a significant financial impact for ISPRS. First of all, participation in the digital events was nearly free of charge to keep the community together. This meant that ISPRS had to substantially support the local host, as the professional organisation of a digital meeting and live streaming comes, of course, with a cost. The possibility to cancel the Congress altogether was not a viable alternative, as contracts for the Congress Centre etc. had been signed beforehand and at least down payments would have been lost. In addition, Council felt strongly that SFPT deserves the chance to organise the Congress, and finally, an alternative location was not available either.

In recognition of the fact that not only ISPRS itself, but also its members are lacking income during the pandemic due to cancelled meetings and a reduction of overall activity, Council decided to waive all membership fees for 2021. This was possible due to a comfortable financial cushion. For ISPRS, the financial guideline, which stipulates that the society should be able to survive one inter-Congress period without income, has thus proven to be very wise. The 2016 – 2022 Council is very much aware of the fact that those reserves had been built up by previous society leaders, and not by its own efforts. On behalf of the 2016 – 2022 Council, may I say that we are very grateful to those

who have made it possible for ISPRS to survive this crisis without too many financial concerns.

In closing this issue, I would like to point out that, as every crisis also includes opportunities for new developments, ISPRS tried to take advantage of the digital technology by making use of it, and thus much of the travel and travel costs disappeared. Living in different parts of the globe did not preclude people from coming together anymore (although, only via video chats), and thus participation numbers were significant. A prime example of this development was certainly the celebration of the 90th birthday of former ISPRS President and Honorary Member, Gottfried Konecny in June 2020.

Another point to be mentioned is the Digital Keynote Series, established in early 2021, with exciting presentations about every month or two. Council suggests to continue this series well into the future, as it has attracted large crowds and can be judged a splendid success. Finally, let me point to the fact that these dashboards we have all seen in the evening news over the last two years, showing the evolution of the corona virus are, of course, based on mapping and geospatial information. Thus, we can conclude that GI has seen a significant increase in popularity and recognition by the public – the technology we offer does contribute as one (of many) to fight and eventually defeat the pandemic.

Conclusions and future challenges

In the past six years, the path of scientific excellence in photogrammetry, remote sensing and spatial information science has been continued successfully, as witnessed by the growth in size and importance of the ISPRS journals and the large number of participants in the Symposia and the Geospatial Weeks. During the pandemic, ISPRS started to offer digital services, and in particular two successful digital Congress editions. In order to continue their activities in the same way, ISPRS has to be aware of and find answers to a number of future challenges. The major ones are:

- to define a sustainable relationship with its neighbouring disciplines and communities, some of which, like computer vision, are much larger;
- to give industry and the commercial world a stronger vote, while not compromising the search for excellent science;
- to increase the influence in the socio-political arena by collaborating more closely with national and international space organisations and mapping organisations, incl. UN OOSA and UN GGIM;
- to discuss and implement more professional approaches to organising large events, incl. commercial exhibitions;
- to define its new role in post-pandemic times, incl. a good balance between in-person and digital events, and a viable business model for virtual events;
- to increase and improve its activities towards global education and outreach, in particular on the African continent.

It seems that in its new structure and with the dedication of its community, ISPRS will master those challenges and will remain viable and relevant in the years to come.

Acknowledgements

I would like to acknowledge the great support from many people during my term as ISPRS President.

First of all, my thanks go to our colleagues from the Société Française de Photogrammétrie et de Télédétection (SFPT). In what could be described as a play in three acts - a great first act of Congress preparation, followed by a second act considered by many as a nightmare, yet with two pinnacles being the digital events in 2020 and 2021, to a tremendous coda, when the physical Congress finally became reality, they never gave up, always kept calm, brought in creative ideas, supported and implemented Council ideas and decisions, and always believed in a happy end. Such development can only happen when there is strong leadership and an enthusiastic team. Thank you very much to Congress Director Nicolas Paparoditis, SFPT President Aurélie Sand, Institutional Chair Laurent Polidori, Programme Chairs Clément Mallet, Florent Lafarge, Ewelina Rupnik and Loïc Landrieu, Industry Chair Pierre Grussenmeyer, Media Chair Tania Landes, Financial Chair Eric Labergerie, Inez Burger from ISPRS 2020 and Key4Events, and all those enthusiastic people I have not mentioned in person!

I would like to thank everybody within ISPRS who has interacted with me in one way or another, particularly all Council Members, all TCPs, Vice-TCPs and WG officers, with whom it was a pleasure to cooperate in the spirit of real teamwork. I would also like to mention Markus Englich, the ISPRS web master, who, in a very reliable and efficient manner, has supported the work of ISPRS for more than a decade now.

A group I would like to single out is the Student Consortium. In a time, when nobody of the elder generation really knew what to do and how to operate those new fancy devices, which most of us had only seen from the distance (namely, when youngsters played online computer games), it was the Student

Consortium, under the leadership of Sheryl Rose Reyes, who taught us how to operate the new technology and thus showed us a way to keep in contact when meeting in person was not possible. The Student Consortium is vital for the future of ISPRS, anyway, but the help offered to the Society in the last more than two years was tremendous – thank you very much!

I would like to acknowledge the advice of previous ISPRS presidents and Council members, in particular Gottfried Konecny, John Trinder, Ian Dowman and Orhan Altan, who always took time to think about solutions when a question arose - which it did many times.

Also, I would like to mention my colleagues from IPI. Besides Annette Radtke, who runs the ISPRS Headquarters in an outstanding manner and keeps on top of all daily matters in a way second to none, I would like to thank our IT gurus Uwe Breitzkopf, and Amadeus Langer, who solved technical problems in a perfect way whenever necessary.

The financial support for the salary of Annette Radtke, for my travel and for consumables came from DFG - The German Science Foundation. Without their funding of more than 355,000€ over the six years, I would not have been able to carry out the job of President without the need of funds from ISPRS. This very generous support is gratefully acknowledged.

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I have also had excellent support from DGPF - the German Society of Photogrammetry, Remote Sensing and Geoinformation. DGPF supported my activities with a considerable sum of 3,500€.

There is a lot of effort involved in running a society like ISPRS, but the rewards from working with such a dedicated and stimulating group of people makes it all worthwhile, indeed. I would like to thank all members of the Society and the supporting organisations who have assisted me so willingly during the past six years. Without their help I could not have carried out the job.

Annexes

- Annex 1: Organization of ISPRS Business Meetings
- Annex 2: Reports published in ISPRS e-Bulletin and other media
- Annex 3: Representing ISPRS at other Conferences
- Annex 4: Congress postponement 2020
- Annex 5: Congress postponement 2021
- Annex 6: Rationale for Congress postponement 2021

Annex 1: Organization of ISPRS Business Meetings

With the strong support from the Secretary General and ISPRS Headquarters, 14 in-person council meetings/joint meetings (partly in conjunction with scientific conferences) and 31 video conferences were

organized. During the pandemic, video conferences were obviously the only feasible way to meet, and a large series of shorter meetings was scheduled. Minutes of all in-person meetings and some video conferences have been published on the ISPRS website.

No.	Dates	Council Meeting	Joint Meeting	Venue (combined conference, if any)
2016				
1	July 20, 2016	√	√	Prague, Czech Republic (ISPRS XXIII Congress)
2	Oct. 16-20, 2016	√	√	Colombo, Sri Lanka
3	Dec. 7, 2016	√		Video conference
2017				
4	March 17-19, 2017	√		Nice, France
5	Aug. 9, 2017	√		Video conference
6	Sept. 19-22, 2017	√	√	Wuhan, China (ISPRS Geospatial Week)
7	Dec. 14, 2017	√		Video conference
2018				
8	March 18-21, 2018	√		Istanbul, Turkey
9	May 7-9, 2018	√		Beijing, China (Com. III Symposium)
10	June 28, 2018	√		Video conference
11	Sept. 13, 2018	√		Video conference
12	Oct. 4, 2018	√		Delft, The Netherlands (Com. IV Symposium)
13	Nov. 21-23, 2018	√	√	Dehradun, India (Com. V Symposium)
2019				
14	March 27-29, 2019	√		Toronto, Canada
15	June 10-14, 2019	√	√	Enschede, The Netherlands (ISPRS Geospatial Week)
16	Nov. 15-26, 2019	√		Guilin, China (International Conference on Geomatics in the Big Data Era)
2020				
17	Jan. 6, 2020	√		Video conference
18	Feb. 10, 2020	√		Video conference
19	March 23-27, 2020	√	√	Video conference
20	April 3, 2020	√		Video conference
21	May 11, 2020	√		Video conference
22	May 27, 2020	√	√	Video conference
23	June 19, 2020	√		Video conference
24	June 25, 2020	√	√	Video conference
26	July 1, 2020	√		Video conference
26	July 9, 2020	√	√	Video conference
27	Sept. 11, 2020	√	√	Video conference
28	Nov. 6, 2020	√		Video conference
29	Nov. 20, 2020	√	√	Video conference
30	Dec. 11	√		Video conference
31	Dec. 21	√		Video conference
2021				
32	Jan. 8, 2021	√		Video conference
33	Feb. 5, 2021	√		Video conference
34	Feb. 19, 2021	√	√	Video conference
35	March 26, 2021	√		Video conference
36	April 9, 2021	√	√	Video conference
37	April 29, 2021	√		Video conference

38	May 20, 2021	✓	✓	Video conference
39	June 18, 2021	✓	✓	Video conference
40	Sept. 2, 2021	✓		Video conference
41	Oct. 8, 2021	✓	✓	Video conference
42	Nov. 5, 2021	✓		Video conference
43	Nov. 27-28, 2021	✓		Paris, France (60 anniversary SFPT)
2022				
44	Jan. 21, 2022	✓	✓	Video conference
45	Feb. 21-22, 2022	✓		Budapest, Hungary
46	April, 11-12, 2022	✓		Prague, Czech Republic
47	April / May 2022	✓		Weekly short video conferences
48	June, 3-5, 2022	✓		Nice, France (pre-Congress meeting)

Annex 2: Reports published in ISPRS e-Bulletin and other media

Magazines	Issue/Date	Title
ISPRS e-Bulletin	Issue 4, 2016	ISPRS – the next 4 years
	Issue 2, 2020	Editorial
	Issue 1, 2021	Another pandemic year: ISPRS 2021 Congress edition will be digital – but a real Congress (together with Nicolas Paparoditis)
	Issue 3, 2021	2021 Digital Edition of the XXIV ISPRS Congress completed successfully (together with Nicolas Paparoditis)
	Issue 5, 2021	ISPRS updates strategic vision and mission plan for its publications
GIM Page	No. 12, 2016	ISPRS Hannover Workshop: A mix of geometry and semantics from images
	No. 8, 2017	The prepublication of papers in public archives
	No. 1/2, 2019	Reviewing – Nuisance or Necessity?
	No. 7/8	LAGIRS 2020 – Another opportunity for cooperation between ISPRS and GRSS (together with P. Gamba)
	No. 3/4, 2020	New ISPRS services for members and the ISPRS community at large
Annual Report	2016-2017 Biennial Report	Message from the President
	2018-2019 Biennial Report	Message from the President

Annex 3: Representing ISPRS at other Conferences

During the past six years, I have represented ISPRS at numerous conferences and meetings organized by

ISPRS or other international organizations. This participation gave me a very good opportunity to learn from our members and to meet representatives from other countries/organizations.

Name of meeting	Date	Remarks
2016		
Visit of Spanish OdM SECFT - Spanish Society of Cartography, Photogrammetry & Remote Sensing, Madrid	2016_09_29	Discussion
ACRS Opening, Colombo + visit RgM AARS	2016_10_17	Welcome message
ISPRS presentation + session	2016_10_18	Presentation
Visit of Dep. of Survey, Sri Lanka (OdM)	2016_10_19	Discussion
60 years Geomatics at Wuhan University	2016_10_22	Welcome message
AARSE Ann. Meeting, Kampala, presentation + visit of RgM	2016_10_24	Presentation
SELPER International Symposium, Opening, Puerto Iguazú + visit of RgM	2016_11_07	Welcome message
ISPRS presentation	2016_11_08	Presentation
INPE, São José dos Campos, Visit of StM	2016_11_11	Presentation
Hong Kong Institute of Surveyors (OdM) Annual Dinner	2016_11_24	Written message
Celebration, ISPRS Fellow Ivan Antipov 90 years, Novosibirsk	2016_12_02	Written + video message
2017		

Visit of NRSPS - Nepal Remote Sensing and Photogrammetric Society (OdM), Kathmandu	2017_01_27	Discussion
Oldenburger 3D-Tage, Opening	2017_02_01	Welcome message
Visit of Egyptian OdM ECSM - Egyptian Commission for Surveying and Mapping, Cairo	2017_05_06	Discussion
Symp. Bras. Sens. Rem., Opening + visit of OdM, StM INPE, Santos	2017_05_28	Welcome message
IAA Small Satellite Symposium + visit of Mongolian OdM MSPRS - Mongolian Society of Photogrammetry and Remote Sensing, Ulanbaatar	2017_08_22	Presentation, discussion
ISPRS Workshop on collaborative and dynamic land cover information services supporting UN SDG goals, Jinan	2017_09_16	Welcome message
Reception by NASG China (OdM), Wuhan	2017_09_17	Discussion
ISPRS Geospatial Week 2017, Wuhan, Opening	2017_09_18	Welcome message
ACRS Opening, New Delhi	2017_10_23	Key Not
Brazilian Congress on Cartography, SBC, Rio de Janeiro	2017_11_06	Welcome message (video)
2018		
Visit to Dubai Municipality (StM)	2018_01_20	Discussion
DGPF (OdM) Annual Meeting	2018_03_07	ISPRS report
GI4DM, Istanbul	2018_03_18	Welcome message
LARS 2018 Opening, Santiago de Chile + visit SAF (AsM)	2018_04_03/05	Welcome message, discussion
SBC, Rio de Janeiro, Visit of OdM	2018_04_09	Discussion
ISPRS Com. II Symposium, Riva el Garda	2018_06_04	Welcome message
UNISPACE +50 Panel discussion, Vienna	2018_06_19	Panel member
RSPSoc, Visit of OdM during UK National Earth Observation Conference, Birmingham	2018_09_04	Opening Key Note, Discussion
SPIE Remote Sensing Europe, Berlin	2018_09_10	Discussion
Polish Society Annual Meeting, Visit of OdM, Koszalin	2018_09_19	Opening Key Note, discussion
TeanGEO 2018, Visit of RgM CRTEAN, Tunis	2018_09_28	Plenary Key Note, discussion
ISPRS Com. IV Symposium, Delft	2018_10_01	Welcome message
ACRS 2018, Opening Ceremony and visit to RgM AARS, Kuala Lumpur	2018_10_15	Welcome message, presentation
AARSE, Visit to RgM during AARSE Conference 2018, Alexandria	2018_10_25	Plenary Key Note, discussion
DGK (German Geodetic Commission), Munich	2018_11_08	Presentation
EuroSDR, Visit of RgM during Board Meeting, Berlin	2018_11_16	Presentation
Visit to StM Mohammed Bin Rashid Space Center, Dubai	2018_11_18	Discussion about GSW 2021
ISPRS Com. V Symposium, Dehradun	2018_11_20	Welcome message
2019		
DGPF/OVG/Swiss Society, 3 Ländertagung, Vienna	2019_02_20	Greetings
Visit to OdM CRSS, Toronto	2019_03_27	Presentation
Visit to OdM SFPT, Paris	2019_04_30	Discussion
Visit to OdM NCC, Tehran	2019_05_05	Discussion
Meeting FIG, IAG, ICA, ISPRS, Tag der Geodäsie – Hannover	2019_05_24	Presentation
ISPRS GSW Opening, Enschede	2019_06_10	Welcome message
International Workshop on Polarized Remote Sensing, Peking University, Beijing	2019_06_17	Presentation
GI4DM, Prague	2019_09_04	Welcome message
ISRSE, 38 th Symposium, Baltimore	2019_10_08	Welcome message
ACRS 2019, Opening Ceremony and visit to OdM Korean Society, Daejeon	2019_10_14/15	40 th Anniversary greetings
Hong Kong Institute of Surveyors (OdM) Annual Dinner	2019_11_12	Welcome message
International Conference on Geomatics in the Big Data Era, Opening Ceremony, Guilin	2019_11_15	Welcome message
DGK Annual Meeting, Munich	2019_11_18	Presentation

2020		
DGPF Meeting, Stuttgart, Opening	2020_03_05	Welcome message
IEEE GRSS AdCom Meeting (online)	2020_07_17	Presentation
ISPRS Congress Nice, 2020 edition (online)	2020_08_31	Welcome message (video)
ACRS 2020, Opening, Deqing (online)	2020_11_09	Welcome message (video)
ACRS 2020, Deqing, Panel session (online)	2020_11_10	Video
DGK Annual Meeting, Munich (online)	2020_11_26	Presentation
2021		
SIFIT, 70 years anniversary (online)	2021_01_04	Congratulation message
Intermediate Pacific Islands GIS & RS User Intermediate Conference, Suva (online)	2021_02_23	Presentation
International Geomatics Conference, Saudi Geographic Society, Riyadh (online)	2021_03_29	Opening Key Note
Symp. Bras. Sens. Rem., Opening ISPRS-Webinar on Domain Adaptation (online)	2021_04_13	Welcome message (Video)
ISPRS Congress Nice, 2021 edition (online), Opening Remarks	2021_07_05	Presentation
ISPRS Congress Nice, 2021 edition (online), Forum on Geo for Pandemics	2021_07_09	Welcome message
IGARSS 2021 Brussels (online), Special Session on GRSS-ISPRS cooperation	2021_07_12	Presentation
Brazilian GRSS-ISPRS Summer school (online), Greetings	2021_08_17	Welcome message (Video)
CIPA Symposium, Beijing (online)	2021_08_28	Opening Key Note
URSI General Assembly and Scientific Symposium, Opening Session, Rome (online)	2021_08_29	Invited participation
ZGC Forum, Beijing, Opening session (online)	2021_09_24	Invited participation
ISPRS Keynote Speaker Series, All you ever wanted to know about the ISPRS Congress n Nice 2022 (online)	2021_10_05	Presentation
XIX International SELPER Symposium, Opening, Santiago de Chile (online)	2021_11_16	Presentation
ACRS 2021, Opening + ISPRS presentation, Can Tho (online)	2021_11_22	Welcome message (video) + presentation
Pacific Islands GIS & Remote Sensing User Conference, Vanuatu (online)	2021_11_23	Presentation
DGK Annual Meeting (online)	2021_11_25	Presentation
SFPT, 60y anniversary, Paris	2021_11_29	Congratulation message + presentation

Annex 4: Congress postponement 2020

International Society for Photogrammetry and Remote Sensing
Internationale Gesellschaft für Photogrammetrie und Fernerkundung
Société Internationale de Photogrammétrie et de Télédétection



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 26 March 2020

Reference: Postponement of ISPRS XXIV Congress**TO WHOM IT MAY CONCERN**

ISPRS officially announces that due to the corona virus crisis, the XXIV ISPRS Congress to be held in Nice, France, has been postponed to 2021. Council is aware that this decision has many consequences, but the very real health risks and the capacity to travel for the Congress participants did not leave us with any other alternative.

As the reviewing process of scientific submissions is nearly completed, the preparation of the ISPRS Archives and Annals scheduled for this summer is on track, and the proceedings will be published as planned. Results of abstract review are already out, those for the double-blind peer review will follow at the end of the month, and the deadline for submission of camera-ready manuscripts stays May 4, 2020.

All registrations for this year's Congress will be carried forward to next year. This means that anybody who has registered and paid the registration fee until May 4, 2020 can use that fee to participate in the Congress in July 2021, and if desired, submit a new paper for the July 2021 Congress.

Sponsors and exhibitors are also encouraged to maintain their involvement in the Nice Congress even though it is postponed by one year. The involvement of companies in the activities of ISPRS is indeed essential.

The General Assembly and all elections have also been postponed until next year. We ask all ISPRS officers to please continue their service for the society in their current position for an additional 12 months.

ISPRS Council is diligently working on developing the details of this transition, including refund policy, publication requirements, etc., and will make corresponding announcements in subsequent communications in the near future.

All the best and hoping to see you in Nice in July 2021,

Christian Heipke, ISPRS President

Annex 5: Congress postponement 2021

International Society for Photogrammetry and Remote Sensing
Internationale Gesellschaft für Photogrammetrie und Fernerkundung
Société Internationale de Photogrammétrie et de Télédétection



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10 February 2021

ISPRS Congress edition 2021 digital only, physical meeting shifted to 2022

Considering the current pandemic situation worldwide, the restrictions to travel and cross borders in the short term, and then the health risks for the members of our community, the ISPRS Council, after a long deliberation, has made the difficult decision to run the 2021 edition of the XXIV Congress digitally only (online) on the planned dates in July, 2021 and a primarily in-person meeting in June 2022.

This 2021 edition of the XXIV Congress will have all the features of a classical ISPRS Congress except for the General Assembly which will be postponed to the 2022 edition of the XXIV Congress, to be held from June 6-10, 2022. This 2021 edition will feature the classical Congress program, including scientific tracks and sessions, plenary sessions with exciting keynote speakers, a forum track to discuss hot topics for our community (the role of geo in pandemics, earth resource and climate change monitoring, smart cities and autonomous navigation, etc.). The 2021 edition will also involve a technology track for the industry to present their latest innovations, and an exhibition to meet with sponsors and exhibitors.

All papers submitted in 2021 that successfully pass the peer review process will be published in the Proceedings (Annals and Archives) of the 2021 edition of the XXIV Congress. If authors agree, the videos of the oral presentations of the papers will be made available on the ISPRS media library together with the presentations of the 2020 edition, allowing a stronger dissemination of scientific contributions in the geospatial community.

All registered participants of the XXIV Congress will have the possibility to participate, and present their scientific contributions in both events with the same registration.

Newly registered participants will have the choice to participate only in the 2021 edition or to register for an attractive bundle for the 2021 and 2022 editions.

We all deeply regret that we will not be able to meet and network physically in 2021 but we do believe that the current vaccination programs with lifted travel restrictions will allow us to meet physically again in 2022. We are also convinced that both events will be successful and serve the geospatial community at large.

We thank you for supporting ISPRS, particularly through these difficult times!

Christian Heipke, ISPRS President & Nicolas Paparoditis, ISPRS Congress Director

Annex 6: Rationale for Congress postponement 2021

International Society for Photogrammetry and Remote Sensing
Internationale Gesellschaft für Photogrammetrie und Fernerkundung
Société Internationale de Photogrammétrie et de Télédétection



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 10 February 2021

Dear all,

in this note we want to give you some background information on the decision of Council to run the 2021 edition of the Congress digitally only, and to move the physical Congress to 2022, which implies that the whole ISPRS cycle will be shifted by two years (the next Symposia will be held in 2024 and the next Congress in 2026). We hope that this additional information will make our rationale more transparent.

The decision was based on the following arguments:

- While we do not know what will happen in 2022, it has become clear in recent weeks, that very few people, indeed, will go to Nice this summer. In addition to travel restrictions, many are not willing to travel without being vaccinated. For many potential participants, vaccination will not happen before summer or autumn this year.
- As a result, the 2021 meeting would have been mostly digital in any case. Thus, the real question was not the character of the 2021 meeting, but when (a) the next Congress and (b) the next General Assembly should be held.
- We can now hope to have a Congress in 2022, six years after the Prague Congress. Given that this year's meeting is only digital, the alternative would have been one in 2024 only. We believe that not having a Congress for a total of 8 years is rather risky, because by then the community might have substantially disintegrated. The way for ISPRS to remain relevant is to do something important and to remain visible. Bigger meetings are a means to do so.
- We believe it would be very difficult, indeed, to staff a new set of Commissions, working groups etc., when running a digital-only meeting. In addition, the new TCPs would have only had one year to prepare for a 2022 Symposia. Therefore, we believe a shift of the ISPRS meeting cycle is the better solution.
- As a face-to-face General Assembly is much easier to organise, in particular on a global scale, where time zones need to be taken into account and internet access possibilities vary widely across the globe, not to mention transparent, secure and fast voting. With the 2022 Congress in the calendar, we therefore opted to shift the General Assembly to 2022, also.
- There is also a financial side: it is true, of course, that a digital meeting does not come for free. Nevertheless, it is much less costly than a hybrid meeting. Note, that contracts have been signed to rent the Congress Centre and many other facilities, and there is legally no way to cancel those contracts from our side. How would we explain to our members that we accepted a very significant financial loss (six digits in €) without even trying to limit the deficit by organising a Congress at that very Congress Centre with a hopefully balanced budget in 2022?
- Finally, our French hosts started planning the organisation of the Congress more than 10 years ago. Despite the pandemic, they are still very motivated to organise a physical meeting and to welcome the world to their country, although they have shouldered an extreme additional amount of work by agreeing to also organise the digital meetings in 2020 and 2021. In this situation, Council feels that we cannot say "thanks for the work – tough luck with the pandemic" and then ignore the deficit, and move on to another destination. Which signal would ISPRS send to the

rest of its members and the community at large? Council believes that during these times, we all need to show solidarity with respect to each other - the Congress organisers need and deserve the support of the whole community.

To Council, these were the reasons to take the decision to have a face-to-face Congress in Nice in 2022. We also determined that this will be the last change in schedule, so should there be no improvement as far as the pandemic goes over the next 12 months, there will not be any additional change of dates. In concert with this decision, the whole meeting sequence will be shifted by two years, so we will have symposia in 2024 and the next Congress in 2026.

We hope that after reading these lines you have perhaps a little more sympathy for this decision, and we trust that you will stay committed to ISPRS and its aims.

All the best and thanks for your support of ISPRS.

Yours,

Christian Heipke, ISPRS President

Report of ISPRS Secretary General Lena Halounová to the General Assembly for the Term 2016-2022

Distinguished Delegates, Ladies and Gentlemen,

It is my great pleasure to present my report to the General Assembly as Secretary General for the term 2016 – 2022. Following my position as Congress Director from 2012 – 2016, I have continued to do my best to serve the Society and its members. The work of the Secretary General is very different compared to the scientific and practical work involved in organising one event. The Office of the Secretary General requires keeping a constant overview of the various activities of the Society, its members and officers, from many different perspectives, in order to manage the day-to-day administrative work. When necessary, the Secretary General also represents the Society through various channels. These duties are defined by the ISPRS Statutes and Bylaws.

(<https://www.isprs.org/documents/statutes19.aspx>)

(<https://www.isprs.org/documents/bylaws19.aspx>).

Communication

Communication with the Society Members

Various types of communication are implemented to deal with Society business. The most frequent type relates to the approval and organisation of events, the preparation of ISPRS meetings at various levels, countless membership issues, distribution and dissemination of material and information, along with general email enquiries. Another type of

communication is the dissemination of emails to you, the ISPRS members, requesting your response in order to make Society decisions in your favour.

The eBulletin is a one-way communication disseminated regularly, informing the ISPRS community of news and events. The eBulletins can be found at (<https://www.isprs.org/news/newsletter/default.aspx>). We have published 30 eBulletins since the 2016 Congress. Table 1 shows a list of the texts written by the Secretary General in the past ISPRS term. My thanks go to Annette Radtke who significantly helps with their preparation and compiling.

ISPRS co-operates with many organisations and this activity is maintained mainly by the Secretary General. Contact between the Society and its members, and with non-ISPRS organisations is maintained to 99% via e-mails. The transition from paper to email contact, which began some 20 years ago, has not reduced the working hours. However, I believe it opened a more intensive relation among all of us. We received many emails every day and most of them require a reply or an active reaction.

Some tasks in the communication have been done via the ISPRS web site. I am very grateful and express my thanks to Markus Englich, ISPRS Web Master, for his excellent work, which is always done very quickly and very carefully. He also quietly and inconspicuously modernised the whole ISPRS web site.

Table 1. eBulletin editorials and other texts in the eBulletins published by the Secretary General

eBulletin	
2016 No. 3	XXIII ISPRS Congress – a short overview of the past Congress Director
2016 No. 4	New Structure of ISPRS and Joint Meeting during the Asian Conference of Remote Sensing in Colombo, Sri Lanka
2016 No. 5	Report from Global Partnership on Space Technology Applications for Disaster Risk Reduction (GP-STAR)
2017 No. 1	The Jack Dangermond Award for the most outstanding paper in the ISPRS International Journal of Geo-Information
2017 No. 2	Report from GRASF
2017 No. 3	37th EARSeL Symposium
2017 No. 3	Impact Factors reflect the Success of ISPRS Journals
2018 No. 2	50 years of Earth Observation - What's next?
2019 No. 3	Jack Dangermond Best Paper Awards 2017 and 2018 presented in Enschede
2019 No. 3	U.V. Helava Best Paper 2018 Award presented at the GSW2019

2019 No. 3	GSW 2019
2019 No. 4	Call for Nominations for Council Positions and Bids to Host Technical Commissions 2020-24
2019 No. 4	ISPRS awarded at the International Union of Geodesy and Geophysics Centenary
2021 No. 5	Report from Geospatial World Forum

Communication with the Public

ISPRS presents Society activities in two magazines – GIM and Geoinformatics. The Secretary General is responsible for providing texts and photographs several

times per year to the magazine editors. Council Members select interesting topics and propose a responsible author – usually a Council Member or a Technical Commission President.

Table 2. ISPRS Columns published in GIM and Geoinformatics

GIM	
2017	Year of 2017 in the International Society for Photogrammetry and Remote Sensing
2018	Message from ISPRS Secretary General
2018	TC Symposia in 2018.docx
2018	International Society for Photogrammetry and Remote Sensing, and United Nations
2021	ISPRS Keynote Speaker Series – Science is the way to a better world

Geoinformatics	
2017	The Jack Dangermond Award for the most outstanding paper in the ISPRS International Journal of Geo-Information
2019	Development between XXIII and XXIV ISPRS Congresses
2020	Projects financed through ISPRS Initiatives since the XXIII ISPRS Congress

Preparation and Reporting from ISPRS Business Meetings

Business meetings allow mutual discussion between Council Members, together with ISPRS officers, which enable effective decision making.

These meetings are twofold – Council Meetings and Joint Meetings. Joint Meetings are meetings of the Council together with Technical Commissions Presidents and Vice-Presidents. The following table

shows Council Meetings, and Council and Joint Meetings, held together with TCPs and other invited persons of ISPRS (Committee Chairs, TIF Chair, Regional Representatives, etc.). The list of Minutes from the meetings is available at the ISPRS website (<https://www.isprs.org/documents/minutes.aspx>).

An overview of the Joint Meetings is in Table 3 and 4. Minutes of the meetings are available at <https://www.isprs.org/documents/minutes.aspx>.

Table 3. Council Meetings

Date	Place, event	
20/07/2016	Prague, Czech Republic, XXIII Congress	Council Meeting
16 & 19/10/2016	Colombo, Sri Lanka, ACRS	Council Meeting
07/12/2016	Teleconference	Council Meeting
18-19/2017	Nice, France	Council Meeting

09/08/2017	Teleconference	Council Meeting
18-19 & 22/09/2017	Wuhan, China, GSW	Council Meeting with EiCs, ISAC, ICORSE, FinCom, SC, Elsevier
14/12/2017	Teleconference	Council Meeting
19-21/03/2018	Istanbul, Turkey	Council Meeting
07 & 09/05/2018	Beijing, China, Symposium TC III	Council Meeting
28/06/2018	Teleconference	Council Meeting
13/09/2018	Teleconference	Council Meeting
04/10/2018	Delft, Netherlands, Symposium TC IV	Council Meeting
21 & 23/11/2018	Dehradun, India, Symposium TC V	Council Meeting with IPAC, ISAC, Webmaster, SC
27-29/03/2019	Toronto, Canada	Council Meeting with TIF
10, 11 & 14/06/2019	Enschede, Netherlands, GSW	Council Meeting with ISAC, TIF, EiCs, Elsevier, MDPI, Reg. Reps, SC,
18/09/2019	Munich, Germany	Meeting with IPAC chair
15-16/11/2019	Guilin, China	Council Meeting with EiC IJGI
06/01/2020	Teleconference	Council Meeting
12/02/2020	Teleconference	Council Meeting
23-26/03/2020	Teleconference (due to COVID 19)* ¹⁾	Council Meeting
03/04/2020	Teleconference	Council Meeting
11/05/2020	Teleconference	Council Meeting
27/05/2020	Teleconference	Council Meeting
19/06/2020	Teleconference	Council Meeting
25/06/2020	Teleconference	Council Meeting
01/07/2020	Teleconference	Council Meeting
11/09/2020	Teleconference	Council Meeting
06/11/2020	Teleconference	Council Meeting with EiC IJGI
20/11/2020	Teleconference	Council Meeting
11/12/2020	Teleconference	Council Meeting
21/12/2020	Teleconference	Council Meeting
08/01/2021	Teleconference	Council Meeting
05/02/2021	Teleconference	Council Meeting
19/02/2021	Teleconference	Council Meeting

26/03/2021	Teleconference	Council Meeting with Editors-in-Chief, Elsevier, MDPI
09/04/2021	Teleconference	Council Meeting
29/04/2021	Teleconference	Council Meeting
20/05/2021	Teleconference	Council Meeting
18/06/2021	Teleconference	Council Meeting with ISAC, IPAC
02/09/2021	Teleconference	Council Meeting with EiC MDPI
08/10/2021	Teleconference	Council Meeting with Reg. Reps
05/11/2021	Teleconference	Council Meeting
27-28/11/2021	Paris/Teleconference	Council Meeting
21/01/2022	Teleconference	Council Meeting
21/02/2022	Budapest/Teleconference	Council Meeting
10-11/04/2022	Prague	Council Meeting
3-5/06/2022	Grasse	Council Meeting

*) Teleconferences since 23-26/03/2020 till 05/11/2021 - due to Covid-19

Table 4. Joint Meetings

Date	Place
20/07/2016	Prague, Czech Republic
17-18/10/2016	Colombo, Sri Lanka
20-21/09/2017	Wuhan, China
22-23/11/2018	Dehradun, India
12-13/06/2019	Enschede, Netherlands
25/03/2020	Teleconference *)
27/05/2020	Teleconference
25/06/2020	Teleconference
09/07/2020	Teleconference
11/09/2020	Teleconference
20/11/2020	Teleconference
05/02/2021	Teleconference
19/02/2021	Teleconference
09/04/2021	Teleconference
20/05/2021	Teleconference
18/06/2021	Teleconference with ISAC and IPAC Chairs
08/10/2021	Teleconference

21/01/2022	Teleconference
10-11/04/2022	Prague

*) Teleconferences since 25/03/2020 till 21/01/2022 - due to Covid-19

Membership Management

Another duty of the Secretary General is to maintain the membership contacts and state.

ISPRS membership is divided into six types: Ordinary, Associate, Regional, Sustaining, Individual, and Honorary Members. ISPRS has 92 Ordinary Members (OdMs), 13 Associate Members (AsMs), 14 Regional Members (RgMs), 61 Sustaining Members (StMs), 8 Honorary Members (HnMs) and ... Individual Members (on April 30, 2022). Individual Membership is valid for a one-year period. The membership begins upon registration and ends on December 31 every year.

There have been changes in all membership types since the last Congress. Several Ordinary Members were replaced by new organisations due to local decisions, which were approved by postal voting among Ordinary Members. There were also changes in categories. A detailed overview of changes in memberships can be found in the GA Agenda Item 4.

The Secretary General is responsible for updating the database which contains member information and contacts. This is a never-ending task but ensures that Council maintains active contact with ISPRS members. The updated contacts of all members are available at the ISPRS website. I would like to thank Regional Representatives for their significant help with this task (<https://www.isprs.org/members/Default.aspx>).

Coordination of ISPRS Events and ISPRS Co-sponsored Events

The Secretary General is responsible for the coordination of ISPRS events. ISPRS differentiates between activities of ISPRS members: ISPRS sponsored events, which are events organised by ISPRS; and activities of other organisers which are supported by ISPRS and allow the use of the ISPRS logo; they are called ISPRS co-sponsored events.

ISPRS events can be classified into four groups. Workshops and conferences form the first group, which

do not have any predetermined schedule since each is organised by one or several Working Groups. Table 5 gives an overview of the total sponsored and co-sponsored events of the 2016-22 period, including an event of CIPA, ISPRS Committee.

A complete list of ISPRS sponsored and co-sponsored events can be found in Appendix 1.

Table 5. List of ISPRS events approved in 2016 – 2022 (since the Prague Congress)

Year	Sponsored Events	Co-sponsored Events
2016	7	2
2017	21	30
2018	13	19
2019	26	31
2020	10	4
2021	9	7
2022	3	2
2016–2022	89	95

Technical Commission Presidents (TCPs) are responsible for Mid-Term Symposia which cover topics of their Technical Commissions. The Symposia represent the second group of ISPRS events and are held in countries of TCPs, in the years of the Winter Olympic Games. The Symposia (Table 3) were spread throughout Europe and Asia and attracted a high number of participants in 2018. The TC III Symposium boasts the highest number of participants of ISPRS Symposia in the whole ISPRS history.

It is my pleasure to thank Senthil Kumar, TCP V, who sponsored the Council and Joint Meeting during the TC V Symposium in Dehradun.

Table 6. Technical Commission Symposia in 2018

TC	Date	Place	Title	Total Attendance/ Countries	Papers in Archives/ Annals	Parallel Events
I	Oct 9-12	Karlsruhe, Germany	Innovative Sensing - From Sensors to Methods and Applications	170/28	70/22	
II	June 4-7	Riva del Garda, Italy	Towards Photogrammetry 2020	410/37	172/41	
III	May 7-10	Beijing, China	Developments, Technologies and Applications in Remote Sensing	763/52	467/43	International Seminar on SDI
IV	Oct 1-5	Delft, Netherlands	3D Geospatial Information Science - The Engine of Change	550/30	108/34	3D GeoInfo 2018, 3D Cadasters 2018, SDSC 2018
V	Nov 20-23	Dehradun, India	Geospatial Technology- Pixel to People	445	144/66	

Geospatial Weeks (GSWs), the third group of ISPRS events, take place in the odd years between Congresses. The idea to set up such a series was to bring more workshops together to enable experts of the wider scientific community to meet. The concentration of a higher number of participants can be more attractive not only for scientists but also for Sustaining Members and sponsors. Wuhan University was the

venue of the third GSW in 2017. The fourth ISPRS GSW was held at the University of Twente. Both GWS were very successful.

I would like to thank the organisers of these events, who accommodated both Council and Joint Meetings during their GSW.

ISPRS received 88k CHF from the Congress as a percentage from the Congress fees and exhibition.

Table 7. Geospatial Weeks in 2017 and 2019

Term	Place	Workshops Scientific Publications	Total Attendance/ Countries	Papers in Archives/ Annals
Sep 18-22, 2017	Wuhan, China	ISPRS publicizes three kinds of scientific publications: three ISPRS Journals, 1200 Book Series and 1760 proceedings from ISPRS events.	1200/30	817/60
June 10-14, 2019	Enschede, The Netherlands	13 Journals	711/56	289/81

Congresses are the fourth type of ISPRS events. The last one, held in Prague on 12-19 July 2016, attracted a total attendance of 2294 participants from 88 countries. 61 exhibitors presented their products and services in an area of 799 sqm. A Summer School took place in the historical city of Telč, south-east of Prague, in the week before the Congress. The Congress organiser supported participants from developing countries with 35k CHF.

The ISPRS flagship journal - ISPRS Journal of Photogrammetry and Remote Sensing (ISSN: 0924-2716) has reached very good results with [CiteScore](#): 8.64 and Impact Factor: 6.942. It is my pleasure to thank Derek Lichti and Qiang Wang, and Clément Mallet, Editors-in-Chief of the journal, for their great work. Derek Lichti asked to be replaced by a new Editor in Chief and Clément Mallet accepted this position in 2020.

An Open Access journal - the [ISPRS International Journal of Geo-Information](#) (ISSN 2220-9964) - founded in 2012, has reached an Impact Factor equal to 1.840 (2018) and 5-year Impact Factor: 2.022 (2018) within these years. I would like to thank Wolfgang Kainz, Editor-in-Chief of the journal, for his work which has led the journal to reach such a good result in just a few years.

ISPRS Council decided to launch a new Open Access Journal - ISPRS Open Journal of Photogrammetry and Remote Sensing on 1 January 2021. George Vosselman agreed to become its Editor-in Chief.

Book Series

The present scientific community, which is under pressure to publish results in prestigious journals, has significantly less interest in publishing books. The Book Series list comprises 3 volumes since 2016: Spatial Context: An Introduction to Fundamental Computer Algorithms for Spatial Analysis Christopher Gold, 2016; Planetary Remote Sensing and Mapping, Bo WU, Kaichang DI, Jürgen Oberst and Irina Karachevtseva (Edts), 2018; Laser Scanning: An

Emerging Technology in Structural Engineering, Belén Riveiro, Roderik Lindenbergh, 2019.

ISPRS Proceedings

The ISPRS proceedings (The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences and the ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences) are listed in the ISI Conference Proceedings Citation Index (CPCI) of the Web of Science, SCOPUS, the E/I Compendex, and the Directory of Open Access Journals (DOAJ).

The Scientific Committee of the Prague Congress developed detailed Guidelines for papers published in the proceedings. The Guidelines were slightly amended for the Nice Congress and have been included in the Orange Book (<https://www.isprs.org/documents/orangebook.aspx>).

The table shows that a high number of events published full papers in the ISPRS Annals.

A detailed list of all ISPRS Proceedings can be found in Appendix 2.

Table 8. Number of events with Archives and Annals volumes published during 2016 - 2022 (incl. Symposia and GSW proceedings) and events without Archives/Annals proceedings

Year	Events only with Archives	Events only with Annals	Events with Archives and Annals	Events Without Proceedings
2016	3	1	1	3
2017	10	2	7	2
2018	5		7	1
2019	16		7	3
2020	1		6	3
2021	4		3	2
2022	3			
2016-2022	42	3	31	14

The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences

The ISPRS website describes the proceedings, The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences (ISPRS Archives), as a series of peer-reviewed proceedings published by the International Society of Photogrammetry and Remote Sensing (ISPRS). They are published as Open Access since 1999. An overview with links to the entire content of Archives is available at <https://www.isprs.org/publications/archives.aspx> and in Appendix 2.

ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences

The ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences (ISPRS Annals) contain selected full paper double-blind peer-reviewed scientific contributions of ISPRS Congresses, Symposia and a number of Conferences and Workshops. The series was newly established in 2012 (<https://www.isprs.org/publications/annals.aspx>).

Representation of ISPRS at International Meetings

The Secretary General represents ISPRS at various meetings. These are international conferences and

meetings of international organisation of which ISPRS is a member. A list can be found in Appendix 3.

Acknowledgement

I sincerely thank the following organisations and persons: The Society for Photogrammetry and Remote Sensing of the Czech Republic, the Department of Geomatics of the Faculty of Civil Engineering of the Czech Technical University in Prague, Technical

Commission Presidents 2016-2022, and organisers of all ISPRS sponsored events, Directors of GSWs, ISAC and IPAC Chairs, and CIPA President. I would like to express my gratitude to my fellow Council Members, to Annette Radtke, my secretary, and to Markus English, ISPRS Web Master, for their day-to-day hard work, and to the many ISPRS members who support the Society by their participation in education, research, industry and business activities in our branches.

Appendix 1

ISPRS Sponsored Events since the Prague Congress

Date	Title	Place	Proceedings
Jul 24-31, 2016	International Workshop on Cloud Computing and Big Data	Canada, Fairfax	-
Sep 4-7, 2016	International Conference on Geomatics and Geospatial Technology (GGT) 2016	Malaysia, Kuala Lumpur	Arch
Sep 7-9, 2016	1st International Conference on Smart Data and Smart Cities, 30th UDMS	Croatia, Split	Ann
Sep 24-25, 2016	International Workshop on Analysis and Application of Global Land Cover Information	China, Beijing	-
Sep 27, 2016	Machine Learning Methods for Spatial and Temporal Analysis	Canada, Montreal	-
Oct 16-17, 2016	GeoAdvances 2016 : ISPRS Workshop on Multi-dimensional & Multi-scale Spatial Data Modeling	Turkey, Istanbul	Arch
Oct 20-21, 2016	11th 3D Geoinfo Conference	Athens, Greece	Arch/Ann
Mar 1-3, 2017	3D Virtual Reconstruction and Visualization of Complex Architectures	Greece, Nafplio	Arch
May 8-12, 2017	International Symposium on Remote Sensing of Environment 37	Tshwane, South Africa	Arch
May 15-17, 2017	International Workshop on “Photogrammetric and computer vision techniques for video surveillance, biometrics and biomedicine”	Russia, Moscow	Arch
May 22-24, 2017	GEOMATICS & RESTORATION - Conservation of Cultural Heritage in the Digital Era	Italy, Florence	Arch
Jun 6-9, 2017	ISPRS Hannover Workshop: HRIGI 17 – CMRT 17 – EuroCOW 17 Joint Meeting	Germany, Hannover	Arch/Ann
Jun 18-22, 2017	FOSS4G-Europe 2017	France, Marne-La Vallée	Arch
Aug 7-9, 2017	International Symposium on Spatiotemporal Computing 2017	USA, Cambridge	Ann
Aug 13-16, 2017	2017 International Symposium on Planetary Remote Sensing and Mapping	Hong Kong	Arch
Aug 28-Sep 1, 2017	26th ICOMOS/ISPRS CIPA Symposium	Canada, Ottawa	Arch/Ann
Sep 4-7, 2017	International Conference on Unmanned Aerial Vehicles in Geomatics (UAV-g 2017)	Germany, Bonn	Arch/Ann
Sep 18-22, 2017	ISPRS Geospatial Week 2017	China, Wuhan	Arch/Ann

Sep 16-17, 2017	ISPRS Workshop on Collaborative and Dynamic Land Cover Information Services Supporting UN Sustainable Development Goals	China, Jinan	-
Oct 26-27, 2017	3D-GeoInfo 2017	Melbourne, Australia	Arch/Ann
Oct 25-27, 2017	Frontiers in Spectral imaging and 3D Technologies for Geospatial Solutions	Finland, Jyväskylä	Arch
Oct 4, 2017	International Conference on Geomatic and Geospatial Technology 2017	Kuala Lumpur, Malaysia	Arch
Oct 4-6, 2017	Second International Conference on Smart Data and Smart Cities	Mexico, Puebla	Arch/Ann
Oct 11, 2017	ISPRS Workshop on “Role of Geoinformatics in Citizen Science for Governance”	India, New Delhi	-
Oct 7-10, 2017	ISPRS International Joint Conferences of GI Research 2017), SMPR2017, EOEC2017	Iran, Tehran	Arch
Oct 14-15, 2017	4rd International GeoAdvances Workshop, GeoAdvances 2017 : ISPRS Workshop on Multi-dimensional & Multi-scale Spatial Data Modeling,	Karabuk, Turkey	Arch/Ann
Nov 28-29, 2017	LowCost 3D - Sensors, Algorithms, Applications	Germany, Hamburg	Arch
Dec 4-6, 2017	ISPRS WG V/7 workshop “Geospatial Solutions for Structural Design, Construction and Maintenance in Training Civil Engineers and Architects” and a seminar “GIS-based Decision-making in Realizing Smart City Concept”	Ukraine, Kyiv	Ann
Mar 18-21, 2018	Geo-information for Disaster management (Gi4DM)	Turkey, Istanbul	Arch
Mar 27-29, 2018	GRASF Conference 2018 – ISPRS event WG IV/7, WG III/IVb, WG IV/1	U.A.E.Dubai	-
May 7-10, 2018	TC III Symposium	China, Beijing	Arch/Ann
Jun 4-7, 2018	TC II Symposium	Italy, Riva del Garda	Arch/Ann
Aug 29-31, 2018	FOSS4G 2018 Academic Track	Tanzania, Dar-es-Salaam	Arch
Sep 3-5, 2018	International Conference on Geomatic and Geospatial Technology 2018	Malaysia, Kuala Lumpur	Arch
Oct 1-2, 2018	13th GeoInfo Conference 2018	Netherlands, Delft	Arch/Ann
Oct 1-5, 2018	TC IV Symposium	Netherlands, Delft	Arch/Ann
Oct 4-5, 2018	3D Internatuional Conference on Smart Data and Smart Cities	Netherlands, Delft	Arch/Ann
Oct 10-11, 2018	Geoadvances 5th Edition	Morocco, Casablanca	Arch

Oct 10-12, 2018	TC I Symposium	Germany, Karlsruhe	Arch/Ann
Nov 7-8, 2018	2018 ISPRS Workshop on Remote Sensing and Synergic Analysis on Atmospheric Environment	China, Guangzhou	Arch
Nov 20-23, 2018	TC V Symposium	India, Dehradun	Arch/Ann
Feb 6-8, 2019	8th International Workshop - 3D ARCH - 3D Virtual Reconstruction and Visualization of Complex Architectures	Italy, Bergamo	Arch
Feb 18-20, 2019	International Workshop on Earth Observations for Agricultural Monitoring	India, New Delhi	Arch
Feb 10-13, 2019	International Geoinformatics Conference 2019	Saudi Arabia, Riyadh	-
Mar 12-14, 2019	ISPRS Technical Commission III WG III/2, 10 Joint Workshop Multidisciplinary Remote Sensing for Environmental Monitoring	Japan, Kyoto	Arch/Ann
May 2-3, 2019	Underwater 3D recording and modeling: a tool for modern applications and CH recording	Cyprus, Limassol	Arch
May 8-10, 2019	GeoRes2019 (Geomatics and Restoration) - 2nd International Conference	Italy, Milan	Arch
May 13-15, 2019	International Workshop on “Photogrammetric and computer vision techniques for video surveillance, biometrics and biomedicine”	Russia, Moscow	Arch
Jun 10-14, 2019	Geospatial Week 2019	Netherlands, Enschede	Arch/Ann
Aug 26-30, 2019	FOSS4G 2019 Academic Track	Romania, Bucharest	Arch
Sep 3-6, 2019	GI4DM - GeoInformation for Disaster Management	Czech Republic, Prague	Arch
Sep 16-17, 2019	Summer school and Workshop on Evaluation and Benchmark of Sensors and Systems in Photogrammetry and Remote Sensing	Poland, Warsaw	Arch
Sep 18-20, 2019	PIA19 - Photogrammetric Image Analysis 2019	Germany, Munich	Arch/Ann
Sep 24-29, 2019	ISPRS WG V/7 workshop: Measurement, Visualisation and Processing in Bim For Design and Construction Management	Czech Republic, Prague	Arch
Sep 26-27, 2019	14th 3D GeoInfo 2019	Singapore	Arch/Ann
Oct 1-3, 2019	Geospatial Kuala Lumpur 2019	Malaysia, Kuala Lumpur	Arch
Oct 1-3, 2019	Fourth International Conference on Smart Data and Smart Cities	Malaysia, Kuala Lumpur	Arch/Ann

Oct 12-14, 2019	Joint SMPR and GIREsearch 2019, Sensors and Models in Photogrammetry and Remote Sensing	Iran, Karaj	Arch
Oct 25-27, 2019	2019 ISPRS Workshop on Remote Sensing and Synergic Analysis on Atmospheric Environment	China, Nanjing	Arch/Ann
Nov 14-15, 2019	Joint Philippine Geomatics Symposium and 6th International Conference on Geoinformation Advances	Philippines, Manila	Arch
Nov 15-17, 2019	PhilGEOS X GeoAdvances 2019	China, Guilin	Arch
Nov 19-20, 2019	ISPRS and GEO workshop on Geospatial-enabled SDGs Monitoring for the 2030 Agenda	China, Changsha	Arch
Nov 28, 2019	Towards an Automatic Data Processing Chain for Airborne and Spaceborne Sensors	New Zealand, Auckland	-
Dec 2-3, 2019	O3DM 2019 - Optical 3D Metrology workshop	France, Strasbourg	Arch
Dec 2-3, 2019	LowCost 3D 2019, 6th International Workshop LowCost 3D – Sensors, Algorithms, Applications	France, Strasbourg	Arch
Dec 10-11, 2019	BIM Technologies in Urban Land Management and Development using Remote Sensing, Photogrammetry and Laser Scanning Data: Managerial, Engineering and Educational Aspects	Nepal, Dhulikhel,	Arch/Ann
Dec 17-18, 2019	International Symposium on Environmental Health (EnvHealth-2019)	Bangladesh, Dhaka	-
Apr 20-22, 2020	SpaceTimeAI 2020: First International Symposium on Spatio-Temporal Artificial Intelligence	UK, London	Arch/Ann
Mar 22-26, 2020	ISPRS WG III/10 LAGIRS 2020 – the Latin America GRSS & ISPRS Remote Sensing Conference	Santiago de Chile Chile	Arch/Ann
Aug 31-Sept 2, 2020	The 2020 Edition of The XXIV ISPRS Congress Imaging today, Foreseeing tomorrow	Nice France <i>online</i>	Arch/Ann
Sep 9-12, 2020	Heritage 2020. International Conference on Vernacular Architecture in World Heritage Sites. Risks and New Technologies	Spain València <i>online</i>	-
Sep 7-11, 2020	ISPRS TC IV 3D GeoInfo 2020	London, UK <i>online</i>	Arch/Ann
Sep 30–Oct 2, 2020	ISPRS TC IV 5th International Conference on Smart Data and Smart Cities 2020	Nice, France <i>online</i>	Arch/Ann
Oct 7-9, 2020	ISPRS TC IV, ISPRS WG IV/1 The 5th International Conference on Smart City Applications	Turkey Safranbolu <i>online</i>	Arch

Oct 31 - Nov 2, 2020	ISPRS TC V UASG-2020 Second International Conference on Unmanned Aerial Systems-2020	India Greater Noida online	-
Nov 3-4, 2020	ISPRS WG V/7, ISPRS WG III/5 and ISPRS WG II/10 International Workshop of ISPRS "Digital technologies in architecture and construction education – BIM modelling, virtual and augmented reality"	Ukraine Kyiv online	-
Nov 30-Dec 4, 2020	ISPRS ICWG III/IVa Climate Change and Disaster Management: Technology and resilience in a troubled world (Gi4DM, NSW SSSI, URAP2)	Australia Sydney online	Arch/Ann
Mar 29-31, 2021	International Geoinformatics Conference 2021	Riyadh Saudi Arabia	-
Apr 26-28, 2021	ISPRS WG II/10 & WG II/5 PSBB 4th International Workshop on "Photogrammetric and computer vision techniques for video"	Moscow Russia <i>hybrid</i>	-
5-9 Jul, 2021	2021 Edition of XXIV ISPRS Congress Imaging today, Foreseeing tomorrow ISPRS Congress edition 2021 digital only	Nice France online	Arch/Ann
Sep 15-17, 2021	ISPRS TC IV Smart Data, Smart Cities 2021	Germany Stuttgart	Arch/Ann
Sep 27-Oct 2, 2021	ISPRS WG IV/4, WGIV/9 and WGV/8 FOSS4G 2021: Academic Track	Argentina Buenos Aires	Arch
Oct 5-6, 2021	ISPRS WG IV/7 International Conference Geospatial Asia-Europe 2021	Morocco Marrakesh <i>online</i>	Arch
Oct 11-14, 2021	ISPRS TC IV 3D GeoInfo 2021	USA, New York <i>online</i>	Arch/Ann
Oct 27-29, 2021	ISPRS WG IV/1 The 6th International Conference on Smart City Applications	Turkey Safranbolu <i>online</i>	Arch
Nov 17-19, 2021	ISPRS TC IV Philippine Geomatics Symposium (PhilGEOS 2021)	Philippines Quezon City <i>online</i>	Arch
Feb 7-8, 2019	ISPRS WG V/7 workshop: Measurement, Visualisation and Processing in Bim for Design And Construction Management II.	Czech Republic Prague	Arch

Mar 2-4, 2022	ISPRS WG II/8 9th 3D-ARCH - 3D Virtual Reconstruction and Visualization of Complex Architectures - International Workshop	Italy Mantova	Arch
Mar 18-19, 2022	ISPRS WG III/1 The 7 th International conference on Ubiquitous Positioning, Indoor Navigation and Location-Based Services (UPINLBS 2022).	China Wuhan	Arch
25-27 May 2022	ISPRS WG I/7, WG I/2, WG I/6, WG II/3 The 12th International Conference on Mobile Mapping Technology	Padua Italy	

ISPRS Co-sponsored Events since the Prague Congress

Date	Title	Place
Oct 8-9, 2016	Looking from above: when Earth observation meets Vision (EarthVision)	Netherlands, Amsterdam
Nov 24-26, 2016	3D-Modelling and Interpretation for Underwater Archaeology Workshop	South Australia, Adelaide
Feb 22-23, 2017	International Conference on Urban Geoinformatics (ICUG) 2017	India, New Delhi
Mar 5-7, 2017	JURSE	U.A.E., Dubai
Mar 6-8, 2017	GRASF Conference 2017	U.A.E., Dubai
Mar 16-17	International Forum "GEOSTROY" - "Geospatial Solutions for Structural Design, Construction and Maintenance"	Russia, Novosibirsk
Apr 3-7, 2017	1st International Symposium on Applied Geomatics and Geospatial Solutions GEODATA2017	Argentina, Rosario
Apr 17-18, 2017	Sino-EU Workshop on Remote Sensing Observation and Quantitative Analysis of Landslide Hazard	China, Shanghai
Apr 20-22, 2017	XII nd Exhibition and the Scientific Congress Interexpo GEO-Siberia 2017	Russia, Novosibirsk
May 6-8, 2017	10th International Symposium on Mobile Mapping Technology and Summer School on mobile Mapping	Egypt, Cairo
May 9, 2017	Bridging space, time, and semantics in GIScience	Netherlands, Wageningen
Jun 6-8, 2017	Special Session "The Citizen Sensor" with the GeoloTWorld Conference	Belgium, Brusselss
Jun 15-16, 2017	First International Symposium of GRSS-Chile, A review of the State of the Art in Geoscience and the Remote Sensing in Chilean and the World	Chile, Valdivia

Jun 28-30, 2017	UAS4Enviro 2017: Small Unmanned Aerial Systems for Environmental Research	Portugal, Vila Real,
Jul 1-2, 2017	Geospatial Public Health	India, Hyderabad
Jul 2-7, 2017	Joint ISPRS/ICA Session on: LULC Change Detection	USA, Washington
Jul 16-22, 2017	Innsbruck Summer School of Alpine Research 2017 - Close Range Sensing Techniques in Alpine Terrain	Austria, Obergurgl
Jul 18-22, 2017	ISPRS Track at FOSS4G 2017 Europe	France, Marne-La-Vallée
Jul 21, 2017	EarthVision 2017: Large Scale Computer Vision for Remote Sensing Imagery	Hawaii, USA
Jul 24-Aug 2, 2017	Laboratory of Place 2017 - Ghesc and surroundings: history, survey, evolution, Summer School on 3D Surveying in Cultural Heritage	Italy, Montecrestese
Sep 11-14, 2017	SPIE Remote Sensing	Poland, Warsaw
Sep 14-16, 2017	8th International Scientific Conference "Environmental Monitoring, Photogrammetry, Geoinformatics - Modern Technologies and Perspectives of development"	Ukraine, Lviv
Sep 22-23, 2017	Geospatial Hackathon	Turkey, Ankara
Oct 16-19, 2017	17th International Scientific and Technical Conference "From Imagery to Digital Reality: ERS & Photogrammetry"	Israel, Hadera
Oct 20, 2017	Workshop on Pattern Recognition for Earth Observation	Brazil, Rio de Janeiro
Oct 23-25, 2017	MetroArcheo 2017 special session on "3D Imaging for underwater cultural heritage"	Italy, Lecce
Oct 23-28, 2017	ISPRS WG V/4 and WG V/6 Joint Technical Session on "Online Platforms for Education and Outreach"	India, New Delhi
Oct 28, 2017	Workshop on Multi-Sensor Fusion for Dynamic Scene Understanding	Italy, Venice
Nov 6-9, 2017	XXVII Brazilian Congress of Cartography	Brazil, Rio de Janeiro
Nov 13-17, 2017	SELPER Conference	Chile, Temuco
Nov 20, 2017	Workshop on Passive and Active Electro-Optical Sensors for Aerial & Space Imaging	China, Wuhan
Dec 15-16, 2017	National Symposium on Industry Academia Collaboration for Geospatial Technologies – 2017	India, Ahmedabad
Jan 15-17, 2018	14th International Conference on Location Based Services	Switzerland, Zurich
Mar 21-23, 2018	GIS Ostrava 2018 – GIS for Safety & Security Management	Czech Republic, Ostrava
Apr 10, 2018	Close and Long Range Sensing of Environment (Session at EGU 2018)	Austria, Vienna
Apr 27, 2018	Workshop on "Lessons learned from volunteers' interactions with geographic citizen science applications: best practices and design recommendations"	UK, London

May 2-10, 2018	International Seminar on Construction and Application of Spatial Data Infrastructure	China, Beijing
Jun 16-22, 2018	Innsbruck Summer School of Alpine Research 2019 - Close Range Sensing Techniques in Alpine Terrain	Austria, Obergurgl
Jun 27-29, 2018	UAS4Enviro 2018: Small Unmanned Aerial Systems for Environmental Research – 6th Edition	Croatia, Split
Jul 23-Aug 1, 2018	Laboratory of Place 2018 - Ghesc and surroundings: history, survey, evolution. Summer School on 3D Surveying in Cultural Heritage	Italy, Montecrestese
Aug 7-8, 2018	1st International Workshop on Cloud Remote Sensing, Atmosphere Radiation and Renewal Energy Application	China, Beijing
Aug 19-20, 2018	PRRS 2018 - 10thIAPR Workshop on Pattern Recognition in Remote Sensing	China, Beijing
Sep 5-8, 2018	International Conference on 3D Vision	Italy, Verona
Sep 10-14, 2018	15th International Circumpolar Remote Sensing Symposium (ICRSS)	Germany, Potsdam
Sep 12-16, 2018	The International Symposium on Cultural Heritage Conservation and Digitization (CHCD2018)	China, Beijing
Sep 18-20, 2018	International Symposium on the use of space technologies to support Natural and Cultural Heritage sites.	Mexico, Campeche
Sep 24-27, 2018	18th International Scientific and Technical Conference “From Imagery to Digital Reality: ERS & Photogrammetry”	Greece, Crete
Sep 26-28, 2018	Second International Conference & Exhibition on Advanced Geospatial Science & Technology (2nd TeanGeo 2018)	Tunis, Tunisia
Oct 22-24, 2018	4th International Conference MetroArcheo 2018 -Metrology for Archaeology and Cultural Heritage	Italy, Cassino
Nov 14-21, 2018	International Seminar on Standards and Techniques of Spatial Data Infrastructure	China, Beijing, Deqing
Dec 13, 2018	Second GIS Day for Education	Bulgaria, Sofia
Apr 2-4, 2019	Geospatial World Forum 2019	Netherlands, Amsterdam
Apr 6-7, 2019	1st International Conference on Unmanned Aerial System in Geomatics – 2019 (UASG-2019)	India, Uttarpradesh
Apr 17-18, 2019	Workshop on Open Source and Multi-level Education for Geospatial Technology 2019	Taiwan Taipei
Apr 30, 2019	Journée du bicentenaire Aimé Laussedat (1819-1907)	France, Paris
May 6-8, 2019	11th International Symposium on Mobile Mapping Technology and Summer School on mobile Mapping	China, Shenzhen
May 15-17, 2019	4th Joint International Symposium on Deformation Monitoring and Analysis (4th JISDM)	Greece, Athens

May 22-24, 2019	Joint Urban Remote Sensing Event, JURSE 2019	France, Vannes
May 24, 2019	Good City Life: The Role of Urban Data Science in Enhancing Urban Planning and Policy-Making	India, Ahmedabad
May 28, 2019	Workshop 'Photogrammetric 3D Reconstruction for Geo-Applications 2019' (PhotoGA19)	Canada, Kingston
Jun 7, 2019	ISPRS Workshop on Modelling and Managing Geospatial Data	Canada, Fredericton
Jun 16, 2019	Workshop 'Photogrammetric Computer Vision 2019' (PCV 19)	USA, Long Beach
Jun 16, 2019	EARTHVISION 2019 - IEEE/ISPRS Workshop. Large Scale Computer Vision for Remote Sensing Imagery	USA, Long Beach
Jun 16-22, 2019	Innsbruck Summer School of Alpine Research 2019 - Close Range Sensing Techniques in Alpine Terrain	Austria, Obergurgl
Jun 19-21, 2019	64 th Congress of the Italian Society of Surveying and Photogrammetry 2019	Italy, Venice
Jun 24-26, 2019	The Joint International Conference on Earth Observation for Environmental Changes and Geoinformation Technologies for Natural Disaster Management (EOEC-GiT4NDM 2019)	China, Chengdu
Jul 27-31, 2019	Laboratory of Place 2019 - Ghesc and Surroundings: history, survey, evolution. Summer School on 3D Surveying in Cultural Heritage	Italy, Sacro Monte Calvario di Domodossola
Aug 15-18, 2019	15th South East Asia Survey Congress	Australia, Darwin
Sep 1-6, 2019	27th CIPA International Symposium: Documenting the past for a better future	Spain, Avila
Sep 11, 2019	Architecture and Environment - AE Lab 1 "Land Knowledge, Practices & Data"	Italy, Florence
Oct 3-5, 2019	International Conference on Smart Data, Smart Cities, Smart Governance	India, Ahmedabad
Oct 10-11, 2019	Workshop on Researches, Results and Reviews in Geomatics (R3 in Geomatics)	Italy, Naples
Oct 28-31, 2019	19th International Scientific and Technical Conference "From Imagery to Digital Reality: ERS & Photogrammetry"	Republic of Korea, Seoul
Nov 11-13, 2019	15th International Conference on Location Based Services	Austria, Vienna
Nov 13-14, 2019	The Sixth International Ubiquitous Positioning, Indoor Navigation and Location-Based Services (UPINLBS) conference, 2019	China, Beijing
Nov 20, 2019	Workshop on Passive and Active Electro-Optical Sensors for Aerial & Space Imaging	Australia, Sydney
Nov 20-22, 2019	Capacity Building and Education in Geospatial Technology an An ISRS Annual Convention on 'Innovations in Geospatial Technology for Sustainable Development with Special Emphasis on N-E Region, India'	India, Meghalaya

Nov 22, 2019	Geomatics for digitization of built heritage: the GAMHer “Geomatics Data Acquisition and Management for Landscape and Built Heritage in a European Perspective” project	Italy, Bologna
Dec 4-6, 2019	5th International Conference MetroArcheo 2018 -Metrology for Archaeology and Cultural Heritage	Italy, Florence
Dec 13-14, 2019	National Symposium on Industry Academia Collaboration for Geospatial Technology – 2019	India, Ahmedabad
Dec 17-19, 2019	4th Geospatial Technologies Conference, Essential Standards for Spatial Data Infrastructure	Egypt, Cairo
Mar 18-20, 2020	GIS Ostrava 2020 UAV in Smart City and Smart Region	Czech Republic, Ostrava <i>online</i>
Mar 23-25, 2020	Geo Week 2020 ASPRS Annual Conference in conjunction with ILMF	Washington DC, USA <i>online</i>
Jul 1-3, 2020	27th International Conference on Systems, Signals and Image Processing IWSSIP 2020 held as an online conference	Brazil Niteroi – Rio de Janeiro <i>online</i>
Nov 9-11, 2020	ISPRS WG I/6 2020 International Workshop on Automated High-Resolution Earth Observation Image Interpretation	China, Jinan <i>online</i>
Jan 10-15, 2021	ISPRS ICWG II/III, WG II/6 11th IAPR Workshop on Pattern Recognition in Remote Sensing	Italy, Milan <i>online</i>
Mar 17-19, 2021	GIS Ostrava 2021 – Advances in Localization and Navigation	Czech Republic, Ostrava <i>online</i>
Apr 2-4, 2021	ISPRS TC-V UASG-2021 Second International Conference on Unmanned Aerial Systems in Geomatics-2021	Greater Noida India <i>hybrid</i>
May 19-21, 2021	Joint Urban Remote Sensing Event, JURSE 2021	Colombia, Medellin <i>online</i>
8 Jun, 2021	ISPRS WG IV/2 CYBERCARTOGRAPHY A Beyond State-of-the-Art Role of Geovisualization in the Understanding of the World	Chania, Crete Greece <i>online</i>
Aug 28-Sep 1, 2021	28 th CIPA Symposium Title: Great Learning & Digital Emotion	China, Beijing <i>hybrid</i>
Dec 3-5, 2021	2021 International Workshop on Automated High-Resolution Earth Observation Image Interpretation	China, Xiamen <i>online</i>
01 Mar - 30 Nov 2022	ISPRS TC III	Beijing China

	The 2022 Belt and Road International Student Competition on Digital Architectural Design	
Mar 16-18, 2022	GIS Ostrava 2022 – Earth Observation for Smart City and Smart Region	Czech Republic, Ostrava <i>online</i>
April 6-8, 2022	5th Joint International Symposium on Deformation Monitoring (JISDM 2022)	Spain, Valencia

Appendix 2

ISPRS Proceedings: ISPRS Archives 2016 – 2022 since the Prague Congress

Year	Event/Title	Date / Place	Volume	Type
2022	ISPRS WG II/8 9th International Workshop 3D-ARCH "3D Virtual Reconstruction and Visualization of Complex Architectures"	2-4 Mar Mantua, Italy	XLVI-2/W1-2022	digital
2022	ISPRS WG V/7 Measurement, Visualisation and Processing in BIM for Design and Construction Management II	7-8 Feb Prague, Czech Republic	XLVI-5/W1-2022	digital
2021	ISPRS TC IV Philippine Geomatics Symposium 2021	17-19 Nov virtual meeting, Philippines	XLVI-4/W6-2021	digital
2021	ISPRS TC IV (WG IV-1) The 6th International Conference on Smart City Applications	27-29 Oct Virtual Safranbolu, Turkey	XLVI-4/W5-2021	digital
2021	ISPRS TC IV 16th 3D GeoInfo Conference 2021	11-14 Oct New York City, USA	XLVI-4/W4-2021	digital
2021	ISPRS TC IV Joint International Conference Geospatial Asia-Europe 2021 and GeoAdvances 2021	5-6 Oct on-line, Casablanca, Morocco	XLVI-4/W3-2021	digital
2021	ISPRS WG IV/4, WG IV/9 & WG V/8 FOSS4G 2021 – Academic Track	27 Sep - 2 Oct Buenos Aires, Argentina	XLVI-4/W2-2021	digital
2021	ISPRS WG I/1 & WG III/4 1st DESIS User Workshop – Imaging Spectrometer Space Mission, Calibration and Validation, Applications, Methods	28 Sep - 1 Oct virtual, Germany	XLVI-1/W1-2021	digital
2021	ISPRS TC IV 6th International Conference on Smart Data and Smart Cities	15-17 Sep Stuttgart, Germany	XLVI-4/W1-2021	digital
2021	ICOMOS/ISPRS International Scientific Committee on Heritage Documentation (CIPA) 28th CIPA Symposium “Great Learning & Digital Emotion”	28 Aug - 1 Sep Beijing, China	XLVI-M-1-2021	digital
2021	XXIV ISPRS Congress, 2021 edition, Commission I	5-9 Jul on-line, Nice, France	XLIII-B1-2021	digital
	XXIV ISPRS Congress, 2021 edition, Commission II		XLIII-B2-2021	digital
	XXIV ISPRS Congress, 2021 edition, Commission III		XLIII-B3-2021	digital

	XXIV ISPRS Congress, 2021 edition, Commission IV		XLIII-B4-2021	digital
	XXIV ISPRS Congress, 2021 edition, Commission V and Youth Forum		XLIII-B5-2021	digital
2021	ISPRS WG II/10 & WG II/5 PSBB 4th International Workshop on "Photogrammetric and computer vision techniques for video surveillance, biometrics and biomedicine"	26-28 Apr Moscow, Russia	XLIV-2/W1-2021	digital
2021	ASPRS 2021 Annual Conference	29 Mar - 2 Apr virtual, USA	XLIV-M-3-2021	digital
2020	ISPRS TC IV Gi4DM 2020 – 13th GeoInformation for Disaster Management conference	30 Nov - 4 Dec on-line, Sydney, Australia	XLIV-3/W1-2020	digital
2020	ISPRS TC IV, ISPRS WG IV/1 5th International Conference on Smart City Applications	7-8 Oct on-line, Safranbolu, Turkey	XLIV-4/W3-2020	digital
2020	ISPRS TC IV 5th International Conference on Smart Data and Smart Cities	30 Sep - 2 Oct Nice, France	XLIV-4/W2-2020	digital
2020	HERITAGE2020 (3DPast RISK-Terra) International Conference on Vernacular Architecture in World Heritage Sites. Risks and New Technologies	9-12 Sep on-line, Valencia, Spain	XLIV-M-1-2020	digital
2020	ISPRS TC IV 3rd BIM/GIS Integration Workshop and 15th 3D GeoInfo Conference 2020	7-11 Sep London, UK	XLIV-4/W1-2020	digital
2020	XXIV ISPRS Congress, 2020 edition, Commission I	31 Aug - 2 Sep on-line, Nice, France	XLIII-B1-2020	digital
	XXIV ISPRS Congress, 2020 edition, Commission II		XLIII-B2-2020	digital
	XXIV ISPRS Congress, 2020 edition, Commission III		XLIII-B3-2020	digital
	XXIV ISPRS Congress, 2020 edition, Commission IV		XLIII-B4-2020	digital
	XXIV ISPRS Congress, 2020 edition, Commission V and Youth Forum		XLIII-B5-2020	digital
2020	ASPRS 2020 ASPRS 2020 Annual Conference Virtual Technical Program	22-26 Jun on-line, USA	XLIV-M-2-2020	digital
2020	ISPRS WG III/10 2020 IEEE Latin American GRSS & ISPRS Remote Sensing Conference (LAGIRS 2020)	22-26 Mar Santiago, Chile	XLII-3/W12-2020	digital

2019	ISPRS WG V/7 & WG IV/6 International Workshop on “Capacity Building and Education Outreach in Advance Geospatial Technologies and Land Management”	10-11 Dec Dhulikhel, Nepal	XLII-5/W3	digital
2019	ISPRS TC II Optical 3D Metrology	2-3 Dec Strasbourg, France	XLII-2/W18	digital
2019	ISPRS TC II 6th International Workshop LowCost 3D – Sensors, Algorithms, Applications	2-3 Dec Strasbourg, France	XLII-2/W17	digital
2019	ISPRS WG IV/4 & IC WG IV/III ISPRS and GEO Workshop on Geospatially- enabled SDGs Monitoring for the 2030 Agenda	19-20 Nov Changsha, China	XLII-4/W20	digital
2019	ISPRS WG III/5 International Conference on Geomatics in the Big Data Era (ICGBD 2019)	15-17 Nov Guilin, Guangxi, China	XLII-3/W10	digital
2019	ISPRS TC V PhilGEOS x GeoAdvances 2019 “Geomatics and Data Science: Towards Adaptive Management in a Changing World”	14-15 Nov Manila, Philippines	XLII-4/W19	digital
2019	ISPRS TC III Joint meeting of the 21st William T. Pecora Memorial Remote Sensing Symposium (Pecora 21) and the 38th International Symposium on Remote Sensing of Environment (ISRSE 38) "Earth Observation and Continuous Monitoring of Our Changing Planet: From Sensors to Decisions"	6-11 Nov Baltimore, Maryland, USA	XLII-3/W11	digital
2019	2019 ISPRS Workshop on Remote Sensing and Synergic Analysis on Atmospheric Environment (RSAE)	25-27 Oct Nanjing, China	XLII-3/W9	digital
2019	ISPRS WG IV/3, WG I/8 & WG II/4 ISPRS International GeoSpatial Conference 2019, Joint Conferences of 5th Sensors and Models in Photogrammetry and Remote Sensing (SMPR) and 3rd Geospatial Information Research (GI Research)	12-14 Oct Karaj, Iran	XLII-4/W18	digital
2019	4th International Conference on Smart Data and Smart Cities	1-3 Oct Kuala Lumpur, Malaysia	XLII-4/W17	digital
2019	ISPRS WG IV/I 6th International Conference on Geomatics and Geospatial Technology (GGT 2019)	1-3 Oct Kuala Lumpur, Malaysia	XLII-4/W16	digital
2019	ISPRS WG IV/10 14th 3D GeoInfo Conference 2019	24-27 Sep Singapore	XLII-4/W15	digital

2019	ISPRS WG V/7 Measurement, Visualisation and Processing in BIM for Design and Construction Management	24-25 Sep Prague, Czech Republic	XLII-5/W2	digital
2019	ISPRS ICWG II/III PIA19+MRSS19 Photogrammetric Image Analysis & Munich Remote Sensing Symposium: Joint ISPRS conference	18-20 Sep Munich, Germany	XLII-2/W16	digital
2019	ISPRS TC I & WG I/10 Workshop on the Evaluation and Benchmarking Sensors, Systems and Geospatial Data in Photogrammetry and Remote Sensing	16-17 Sep Warsaw, Poland	XLII-1/W2	digital
2019	ICOMOS/ISPRS International Scientific Committee CIPA – Heritage Documentation: 50 Years: Looking Backwards	-	XLII-2/W14	digital
2019	ISPRS ICWG III/IVa Gi4DM 2019 GeoInformation for Disaster Management	3-6 Sep Prague, Czech Republic	XLII-3/W8	digital
2019	ICOMOS/ISPRS International Scientific Committee on Heritage Documentation (CIPA) 27th CIPA International Symposium <i>Documenting the past for a better future</i>	1-5 Sep Ávila, Spain	XLII-2/W15	digital
2019	ISPRS WG IV/4 FOSS4G 2019 – Academic Track	26-30 Aug Bucharest, Romania	XLII-4/W14	digital
2019	ISPRS Geospatial Week 2019	10-14 Jun Enschede, The Netherlands	XLII-2/W13	digital
2019	ISPRS WG II/10 & WG II/5 International Workshop on <i>Photogrammetric and Computer Vision Techniques for Video Surveillance, Biometrics and Biomedicine</i>	13-15 May Moscow, Russia	XLII-2/W12	digital
2019	ISPRS WG II/8, WG III/5, WG V/1 GEORES 2019 <i>2nd International Conference of Geomatics and Restoration</i>	8-10 May Milan, Italy	XLII-2/W11	digital
2019	ISPRS TC II, WG II/9 Underwater 3D Recording and Modelling <i>A Tool for Modern Applications and CH Recording</i>	2-3 May Limassol, Cyprus	XLII-2/W10	digital
2019	ISPRS Technical Commission III WG III/2, 10 Joint Workshop <i>Multidisciplinary Remote Sensing for Environmental Monitoring</i>	12-14 Mar Kyoto, Japan	XLII-3/W7	digital

2019	ISPRS WG III/10 - GEOGLAM - ISRS Joint International Workshop on <i>Earth Observations for Agricultural Monitoring</i>	18-20 Feb New Delhi, India	XLII-3/W6	digital
2019	8th International Workshop 3D-ARCH <i>3D Virtual Reconstruction and Visualization of Complex Architectures</i>	6-8 Feb Bergamo, Italy	XLII-2/W9	digital
2018	ISPRS TC V ISPRS TC V Mid-term Symposium <i>Geospatial Technology – Pixel to People</i>	20-23 Nov Dehradun, India	XLII-5	digital
2018	2018 ISPRS Workshop on Remote Sensing and Synergic Analysis on Atmospheric Environment	7-8 Nov Guangzhou, China	XLII-3/W5	digital
2018	ISPRS TC I ISPRS TC I Mid-term Symposium <i>Innovative Sensing – From Sensors to Methods and Applications</i>	10-12 Oct Karlsruhe, Germany	XLII-1	digital
2018	5th International Conference on Geoinformation Science – GeoAdvances 2018: <i>ISPRS Conference on Multi-dimensional & Multi-scale Spatial Data Modeling</i>	10-11 Oct Casablanca, Morocco	XLII-4/W12	digital
2018	3rd International Conference on Smart Data and Smart Cities	4-5 Oct Delft, The Netherlands	XLII-4/W11	digital
2018	ISPRS TC IV ISPRS TC IV Mid-term Symposium <i>3D Spatial Information Science – The Engine of Change</i>	1-5 Oct Delft, The Netherlands	XLII-4	digital
2018	13th 3D GeoInfo Conference 2018	1-2 Oct Delft, The Netherlands	XLII-4/W10	digital
2018	International Conference on Geomatic & Geospatial Technology (GGT 2018) <i>Geospatial and Disaster Risk Management</i>	3-5 Sep Kuala Lumpur, Malaysia	XLII-4/W9	digital
2018	FOSS4G 2018	29-31 Aug Dar es Salaam, Tanzania	XLII-4/W8	digital
2018	ISPRS TC II ISPRS TC II Mid-term Symposium <i>Towards Photogrammetry 2020</i>	4-7 Jun Riva del Garda, Italy	XLII-2	digital
2018	ISPRS TC III ISPRS TC III Mid-term Symposium <i>Developments, Technologies and Applications in Remote Sensing</i>	7-10 May Beijing, China	XLII-3	digital
2018	ISPRS ICWG III/IVa Geoinformation for Disaster Management	18-21 Mar Istanbul, Turkey	XLII-3/W4	digital
2017	ISPRS TC II 5th International Workshop LowCost 3D Sensors, Algorithms, Applications	28-29 Nov Hamburg, Germany	XLII-2/W8	digital

2017	ISPRS WG IV/1, WG IV/5 & WG IV/10 12th 3D Geoinfo Conference 2017	26-27 Oct Melbourne, Australia	XLII-4/W7	digital
2017	ISPRS WG III/4, WG III/1 & WG I/5 Frontiers in Spectral imaging and 3D Technologies for Geospatial Solutions	25-27 Oct Jyväskylä, Finland	XLII-3/W3	digital
2017	ISPRS WG IV/1 4th International GeoAdvances Workshop – GeoAdvances 2017: ISPRS Workshop on Multi-dimensional & Multi-scale Spatial Data Modeling	14-15 Oct Safranbolu, Karabuk, Turkey	XLII-4/W6	digital
2017	ISPRS TC IV, WG IV/3 ISPRS International Joint Conferences of The 2nd Geospatial Information Research GI Research 2017 The 4th Sensors and Models in Photogrammetry and Remote Sensing SMPR 2017 The 6th Earth Observation of Environmental Changes EOEC 2017	7-10 Oct Tehran, Iran	XLII-4/W4	digital
2017	ISPRS WG IV/10, WG IV/4, WG IV/6, WG IV/7 2nd International Conference on Smart Data and Smart Cities	4-6 Oct Puebla, Mexico	XLII-4/W3	digital
2017	ISPRS WG IV/1 International Conference on Geomatic and Geospatial Technology 2017 "Geospatial and Disaster Management"	4 Oct Kuala Lumpur, Malaysia	XLII-4/W5	digital
2017	ISPRS Geospatial Week 2017	18-22 Sep Wuhan, China	XLII-2/W7	digital
2017	International Conference on Unmanned Aerial Vehicles in Geomatics	4-7 Sep Bonn, Germany	XLII-2/W6	digital
2017	ICOMOS/ISPRS International Scientific Committee on Heritage Documentation (CIPA) 26th International CIPA Symposium – Digital Workflows for Heritage Conservation	28 Aug - 1 Sep Ottawa, Canada	XLII-2/W5	digital
2017	ISPRS ICWG III/II 2017 International Symposium on Planetary Remote Sensing and Mapping	13-16 Aug Hong Kong	XLII-3/W1	digital
2017	ISPRS WG IV/4 FOSS4G-Europe 2017 – Academic Track	18-22 Jun Marne La Vallée, France	XLII-4/W2	digital
2017	ISPRS Hannover Workshop: HRIGI 17 – CMRT 17 – ISA 17 – EuroCOW 17	6-9 Jun Hannover, Germany	XLII-1/W1	digital
2017	ISPRS WG V/1, WG V/2, WG II/8 & CIPA GEOMATICS & RESTORATION – Conservation of Cultural Heritage in the Digital Era	22-24 May Florence, Italy	XLII-5/W1	digital

2017	ISPRS WG II/10, II/5 International Workshop on "Photogrammetric and computer vision techniques for video surveillance, biometrics and biomedicine"	15-17 May Moscow, Russia	XLII-2/W4	digital
2017	37th International Symposium on Remote Sensing of Environment	8-12 May Tshwane, South Africa	XLII-3/W2	digital
2017	TC II & CIPA 3D Virtual Reconstruction and Visualization of Complex Architectures	1-3 Mar Nafplio, Greece	XLII-2/W3	digital
2016	TC IV 11th 3D Geoinfo Conference	20-21 Oct Athens, Greece	XLII-2/W2	digital
2016	3rd International GeoAdvances Workshop	16-17 Oct Istanbul, Turkey	XLII-1/W1	digital
2016	TC IV International Conference on Geomatic and Geospatial Technology (GGT) 2016	3-5 Oct Kuala Lumpur, Malaysia	XLII-4/W1	digital

ISPRS Proceedings: ISPRS Annals 2016 – 2022 since the Prague Congress

Year	Event/Title	Date / Place	Volume
2022	ISPRS WG V/7 Measurement, Visualisation and Processing in BIM for Design and Construction Management II	7-8 Feb Prague, Czech Republic	VIII-5/W1-2022
2021	ISPRS TC IV 16th 3D GeoInfo Conference 2021	11-14 Oct New York City, USA	VIII-4/W2-2021
2021	ISPRS TC IV 6th International Conference on Smart Data and Smart Cities	15-17 Sep Stuttgart, Germany	VIII-4/W1-2021
2021	ICOMOS/ISPRS International Scientific Committee on Heritage Documentation (CIPA) 28th CIPA Symposium “Great Learning & Digital Emotion”	28 Aug - 1 Sep Beijing, China	VIII-M-1-2021
2021	XXIV ISPRS Congress, 2021 edition, Commission I	5-9 Jul on-line, Nice, France	V-1-2021
	XXIV ISPRS Congress, 2021 edition, Commission II		V-2-2021
	XXIV ISPRS Congress, 2021 edition, Commission III		V-3-2021
	XXIV ISPRS Congress, 2021 edition, Commission IV		V-4-2021
	XXIV ISPRS Congress, 2021 edition, Commission V and Youth Forum		V-5-2021
2020	ISPRS TC IV Gi4DM 2020 – 13th GeoInformation for Disaster Management conference	30 Nov - 4 Dec on-line, Sydney, Australia	VI-3/W1-2020
2020	ISPRS TC IV 5th International Conference on Smart Data and Smart Cities	30 Sep - 2 Oct Nice, France	VI-4/W2-2020
2020	ISPRS TC IV 3rd BIM/GIS Integration Workshop and 15th 3D GeoInfo Conference 2020	7-11 Sep London, UK	VI-4/W1-2020
2020	XXIV ISPRS Congress, 2020 edition, Commission I	31 Aug - 2 Sep on-line, Nice, France	V-1-2020
	XXIV ISPRS Congress, 2020 edition, Commission II		V-2-2020
	XXIV ISPRS Congress, 2020 edition, Commission III		V-3-2020
	XXIV ISPRS Congress, 2020 edition, Commission IV		V-4-2020
	XXIV ISPRS Congress, 2020 edition, Commission V and Youth Forum		V-5-2020
2020	ISPRS WG III/10 2020 IEEE Latin American GRSS & ISPRS Remote Sensing Conference (LAGIRS 2020)	22-26 Mar Santiago, Chile	IV-3/W2
2019	ISPRS WG V/7 & WG IV/6 International Workshop on “Capacity Building and	10-11 Dec Dhulikhel, Nepal	IV-5/W2

	Education Outreach in Advance Geospatial Technologies and Land Management"		
2019	4th International Conference on Smart Data and Smart Cities	1-3 Oct Kuala Lumpur, Malaysia	IV-4/W9
2019	ISPRS WG IV/10 14th 3D GeoInfo Conference 2019	24-27 Sep Singapore	IV-4/W8
2019	ISPRS ICWG II/III PIA19+MRSS19 - Photogrammetric Image Analysis & Munich Remote Sensing Symposium: Joint ISPRS conference	18-20 Sep Munich, Germany	IV-2/W7
2019	ICOMOS/ISPRS International Scientific Committee on Heritage Documentation (CIPA) 27th CIPA International Symposium <i>Documenting the past for a better future</i>	1-5 Sep Ávila, Spain	IV-2/W6
2019	ISPRS Geospatial Week 2019	10-14 Jun Enschede, The Netherlands	IV-2/W5
2019	ISPRS Technical Commission III WG III/2, 10 Joint Workshop <i>Multidisciplinary Remote Sensing for Environmental Monitoring</i>	12-14 Mar Kyoto, Japan	IV-3/W1
2018	ISPRS TC V ISPRS TC V Mid-term Symposium <i>Geospatial Technology – Pixel to People</i>	20-23 Nov Dehradun, India	IV-5
2018	ISPRS TC I ISPRS TC I Mid-term Symposium	10-12 Oct Karlsruhe, Germany	IV-1
2018	3rd International Conference on Smart Data and Smart Cities	4-5 Oct Delft, The Netherlands	IV-4/W7
2018	ISPRS TC IV ISPRS TC IV Mid-term Symposium <i>3D Spatial Information Science – The Engine of Change</i>	1-5 Oct Delft, The Netherlands	IV-4
2018	13th 3D GeoInfo Conference 2018	1-2 Oct Delft, The Netherlands	IV-4/W6
2018	ISPRS TC II ISPRS TC II Mid-term Symposium <i>Towards Photogrammetry 2020</i>	4-7 Jun Riva del Garda, Italy	IV-2
2018	ISPRS TC III ISPRS TC III Mid-term Symposium <i>Developments, Technologies and Applications in Remote Sensing</i>	7-10 May Beijing, China	IV-3
2017	ISPRS WG V/7 ISPRS Workshop "Geospatial Solutions for Structural Design, Construction and Maintenance in Training Civil Engineers and Architects"	4-6 Dec Kyiv, Ukraine	IV-5/W1

2017	ISPRS WG IV/1, WG IV/5 & WG IV/10 12th 3D Geoinfo Conference 2017	26-27 Oct Melbourne, Australia	IV-4/W5
2017	ISPRS WG IV/1 4th International GeoAdvances Workshop – GeoAdvances 2017: ISPRS Workshop on Multi-dimensional & Multi-scale Spatial Data Modeling	14-15 Oct Safranbolu, Karabuk, Turkey	IV-4/W4
2017	ISPRS WG IV/10, WG IV/4, WG IV/6, WG IV/7 2nd International Conference on Smart Data and Smart Cities	4-6 Oct Puebla, Mexico	IV-4/W3
2017	ISPRS Geospatial Week 2017	18-22 Sep Wuhan, China	IV-2/W4
2017	International Conference on Unmanned Aerial Vehicles in Geomatics	4-7 Sep Bonn, Germany	IV-2/W3
2017	CIPA 26th International CIPA Symposium – Digital Workflows for Heritage Conservation	28 Aug - 1 Sep Ottawa, Canada	IV-2/W2
2017	ISSC 2017 2nd International Symposium on Spatiotemporal Computing 2017	7-9 Aug Cambridge, USA	IV-4/W2
2017	ISPRS Hannover Workshop: HRIGI 17 – CMRT 17 – ISA 17 – EuroCOW 17	6-9 Jun Hannover, Germany	IV-1/W1
2016	ISPRS TC IV 11th 3D Geoinfo Conference	20-21 Oct Athens, Greece	IV-2/W1
2016	ISPRS TC IV 1st International Conference on Smart Data and Smart Cities, 30th UDMS	7-9 Sep Split, Croatia	IV-4/W1

Appendix 3

Events attended by Secretary General 2016-2022

Representation at International and National Meetings			
24-26/10/2016	Oslo, Norway	Extraordinary GA of ICSU	Representation of ISPRS
09-10/11/2016	Sankt Petersburg, Russia	GEO XIII Plenary	ISPRS representation
01-02/12/2016	Bonn, Germany	UNSPIDER project	Preparation of Booklet on RDR
06-08/02/2017	Vienna, Austria	UNOOSA, COPUOS	ISPRS Statement
22-26/05/2017	Cancun, Mexico	UNISDR	Presentation of Booklet on RDR
01-05/08/2017	New York, USA	Academ. Netw. UN-GGIM	ISPRS statement
01-02/09/2017	Berlin, Germany	GeoUnion Meeting	ISPRS representation
24-26/10/2017	Taipei, Taiwan	32nd ICSU GA	ISPRS representation
23-24/11/2017	Bonn, Germany	UN OOSA	ISPRS representation
31/01-03/02/2017	Vienna, Austria	UNOOSA, COPUOS	ISPRS statement
19-20/06/2018	Vienna, Austria	UNISPACE+50	Organ. of the ISPRS event, welcome speech
01-06/07/2018	Paris, France	ISC 1st General Assembly	Representation of ISPRS
08-11/11/2018	Istanbul, Turkey	GeoUnion Meeting	Chair of the meeting
12-14/02/2019	Vienna, Austria	UNOOSA, COPUOS	Representation of ISPRS
29/07/2019	Paris, France	IUGG Centenary	Accepting IUGG Award for ISPRS
30/07/2019	Paris, France	GeoUnion Meeting	Chair of the meeting
19/09/2019	Kutná Hora, Czech Rep	GA of the Czech ICA	ISPRS representation
3-5/02/2020	Vienna, Austria	UNOOSA, COPUOS	ISPRS statement
21-22/10/2021	Amsterdam, the Netherlands	GWF	ISPRS session

Representing ISPRS at other Conferences			
27-30/09/2016	Antalya, Turkey	Secuk International Scientific Conference on Applied Sciences - 2016	Welcome and Plenary speech
06-08/03/2017	Dubai, UAE	GRASF	Keynote speech
10-13/09/2017	Stuttgart, Germany	Photogrammetric Week	ISPRS representation
15-16/03/2018	Ostrava, Czech Rep.	GIS Ostrava	Plenary presentation
02-06/04/2018	Santiago, Chile	LARS	Plenary presentation
07-11/05/2018	Beijing, China	Symposium TC III	Welcome speech
01-05/10/2018	Delft, Netherlands	Symposium TC IV	Greetings
12-14/10/2018	Prague, Czech Rep.	SSIP	Keynote presentation
15-24/11/2018	Dehradun, India	TC V Symposium	Round table
23-26/04/2019	Novosibirsk, Russia	GeoSiberia	Plenary presentation
10/09/2019	Prague, Czech Rep.	SSIP conference	Keynote speech
14-17/11/2019	Guilin, China	International Conf. on Geomatics in Big Data Era	Keynote speech
18/11/2019	Changsha, China	ISPRS and GEO Workshop on Geospatially-enabled SDGs Monitoring for the 2030 Agenda	Welcome speech

Report of ISPRS Treasurer Songnian Li to the General Assembly for the Term 2016-2022

Opening Comments

It is my pleasure to present a financial summary of the past six years. As announced in 2020 and 2021, the ISPRS congress period has been shifted by two years, making this Congress period six years. During this period, the Society has faced with the similar challenges stated in my two predecessors' reports. In addition, after the year-end of 2019, the Society has also been faced with significant challenge of the COVID-19 pandemic.

The extension of this Congress period makes the financial data from this Congress period less comparable with that from recent Congress periods. This report focusses primarily on the six fiscal years prior to the Congress year (i.e., 2016-2021), for which the incumbent Treasurer has been responsible for

financial operations, year-end reporting, and filing tax returns, but references to the previous quadrennial periods if necessary and appropriate.

ISPRS Financial Summary

ISPRS Net-worth (Total Assets)

ISPRS assets include only current assets (cash and investments). Figure 1 shows the balance of the Society's total assets at the end of each fiscal year from 2015 to 2021. For this six-year Congress period, the initiating balance at the beginning of 2016 was CHF 617,896¹ and ended up with a closing balance of CHF 957,362² at the end of 2021. The Society's current net worth represents an increase of 54% over that of 31st December 2015, compared to 7% increase during the last quadrennial period.

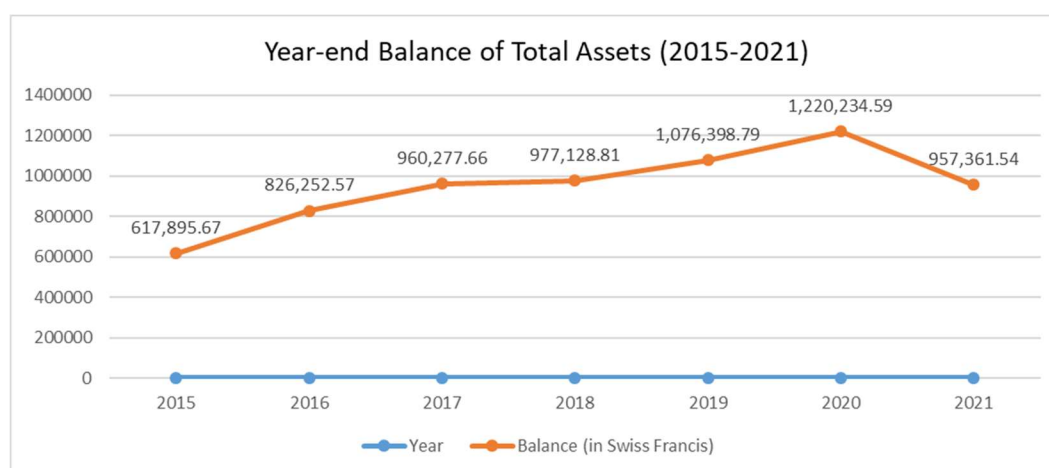


Figure 1. Year-end Balance of Total Assets (2015-2021)

Table 1 provides a summary of ISPRS assets as of 31st December 2021. Total custody account assets reached CHF 887,016, which maintains a more than sufficient level of reserve equivalent to the full, unhindered operation of the Society for a quadrennial term as per the ISPRS Financial Policy. As a result of the higher level of expenditure (costs of organizing ISPRS Virtual Congresses in 2020 and 2021) and the additional

investment in exchange-traded funds of CHF 300,000 in 2021, the total cash asset ended up CHF 70,348 as of 31 December 2021 but still provided the Society the cash flow required to start operation in 2022. An analysis of monthly income and expenditure of the past five years indicates that a minimum opening balance of CHF 20,000 at the beginning of the fiscal year is sufficient to start and maintain the Society's operation.

¹ The opening balance does not include the 2016 Congress load, which was returned in early 2016.

² The net worth does not include the Nice Congress loan to be returned in 2022.

ITEM	31 December 2021	31 December 2021
	(EUR, USD, CHF)	(CHF)
CASH		
Euro #.7EM	23,547.63	24,399.00
USD #.60C	28,348.54	25,830.00
CHF #.01E	20,116.83	20,116.83
Total Cash		70,345.83
INVESTMENTS		
# 359540 Bonds [USD]	231,117.76	203,234.05
# 278859 Bonds [EUR]	201,751.66	209,046.98
# 1640534 Corp Bonds [USD]	163,587.70	143,851.30
# 279211 Strat Fund [CHF]	30,921.70	27,191.08
# 1272980 UBS (LUX) FUND [EUR]	151,468.80	156,945.90
# 10737611 UBS (iShares) [USD]	166,880.00	146,746.39
Total Investments		887,015.71
TOTAL ASSETS		957,361.54

Table 1: ISPRS assets (as of 31st December 2021)

Income and Expenditure

Income and expenditure details for the past six years from 1 January 2016 to 31 December 2021 are provided in Table 2, with the income and expenditure of the first quarter of 2022 provided in Appendix I. The total expenses incurred during this six-year period was significantly less than the total income received, resulting a net surplus of CHF 343k. This represents a

substantial increase compared with a small net surplus of CHF 31k for previous four years (2012-2015). While overall the Society has continued to cost less to run (at least in terms of directly incurred costs) over the last six years, both income and expenditure have increased with annual average income from CHF 182k in 2012-2015 to CHF 278k in 2016-2021 and annual average expenditure from CHF 175k in 2012-2015 to CHF 221k in 2016-2021.

Table 2: ISPRS Income and Expenditure (2016 to 2021)

	2016	2017	2018	2019	2020	2021	Total
Income (CHF)	348,389	258,649	302,652	262,922	274,581	222,797	1,669,990
Expenditure (CHF)	151,572	140,409	267,263	186,807	117,380	463,274	1,326,705
Net Surplus (CHF)	196,817	118,240	35,389	76,115	157,201	-240,477	343,285

Figure 2 presents historical reported income/expenditure for each fiscal year from 1 January 2000 through to 31 December 2021. The linear trend lines indicate an increased divergence of income and expenditure up to the end of 2019, which was disrupted due to the impact of the COVID-19 pandemic in 2020 and 2021.

The substantial increase of revenue in 2016 was mainly due the financial contributions (dividends) from the

2016 ISPRS Congress. The decrease of income in 2021 was mainly due to 2021 membership fee exemption, while the sharp increase of the expenditure in 2021 is attributed to the financial contribution to 2020/2021 editions of virtual congress. As such, the Society ended in the red by 31 December 2021, with expenditure (CHF 463,274) exceeding income (CHF 222,797) for that period.

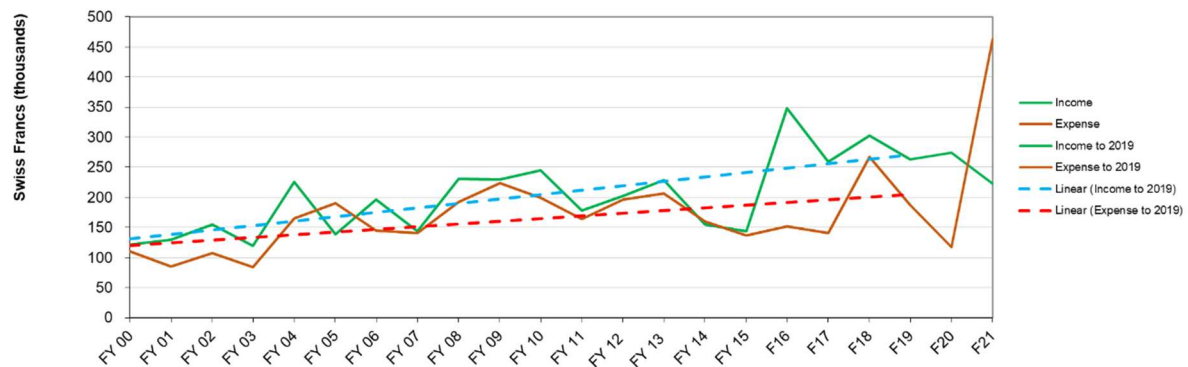


Figure 2. Historical reported income/expenditure (2000-2021)

Income

The Society's incomes are mainly from four sources: membership subscriptions, publication revenue, contribution from major ISPRS events (incl. congress, geospatial week, and midterm symposia), and dividends from ISPRS investments.

Membership Subscriptions

Table 3 provides a summary by category of current ISPRS membership and the number of members who have paid their fees up to 2021 as of April 15, 2022. It is worth noting that a sizeable number of members have also paid their 2022 fees as of April 15th, including 19 ordinary, 2 associate, 5 regional and 23 sustaining members.

Table 3: ISPRS members and payment status by category

Category	No.	Paid members (up to and including 2021)	
		# of paid as of April 15	% of paid as of April 15
Ordinary member	92	60	65.2
Associate member	13	5	38.5
Regional member	14	9	64.3
Sustaining member	61	44	72.1
Total:	180	118	65.6

Figure 3 shows historical collected membership fees by category for each fiscal year from 1 January 2000 through to 31 December 2021 (see also Appendix II for detailed amounts). A rolling four-year average is presented to remove the variations created by members paying large amounts of arrears, etc. in any one year. The total collected fees in each year varied but the four-year average was relative stable. It is worth noting that the exceptionally low level of membership fees collected in 2021 was because the Council decided to waive all members' fees for that year considering the impact of the COVID-19 pandemic to members, which also allowed some members to pay their fees in arrears.

Further, a look at the total membership fees collected from ISPRS ordinary members and sustaining members over the 4 years of previous quadrennial periods, as shown in Figure 4, indicates a continuous significant falling income from sustaining members, which is in line with the findings from the previous treasurer's report to the General Assembly for 2012-2016, that "the income that has reduced most markedly over the period 2008 to 2015 is from the Sustaining Membership".

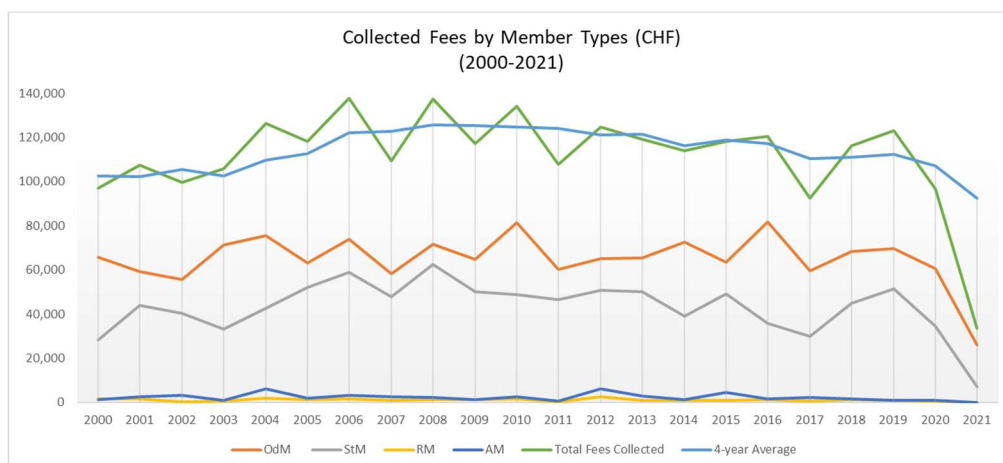


Figure 3. Historical collected membership fees (2000-2021)

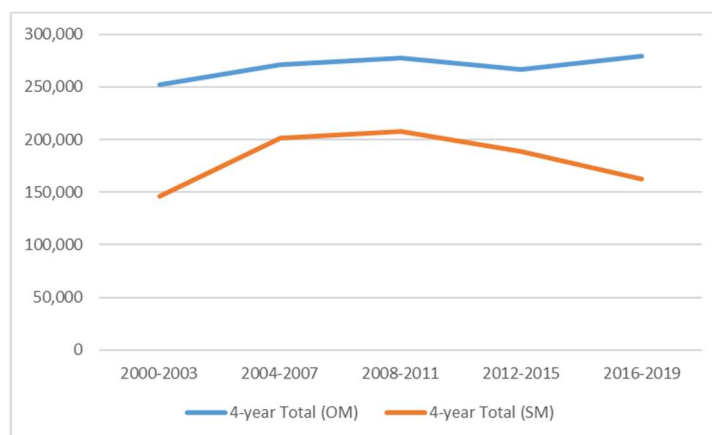


Figure 4. 4-year total of the collected membership fees from ordinary and sustaining members

A visible rise in the number of members in arrear since around 2008 was confirmed in the previous Treasurer's report. As shown in Figure 5, the percentage of members in arrear was up and down over the last six years (2016-2021), but average 48.5% (2016-2020, excluding 2021 when fees were waived). This also confirmed the ongoing trend that only about half of the members will pay their subscriptions, as indicated in the previous Treasurer's report.

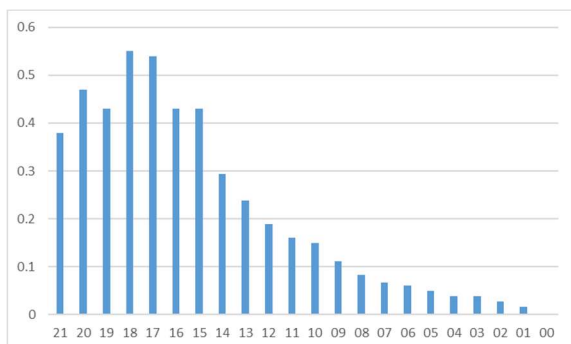


Figure 5. Percentage of members in arrear (2000-2021)

Publication Revenue

Revenue from publication royalties, mainly the two journals: *ISPRS Journal of Photogrammetry and Remote Sensing* (IJPRS) and *ISPRS International Journal of Geo-*

Information (IJGI), has become one of major regular sources of the Society's income, averaging about 50% of the total income. As shown in Figure 6, the revenue from IJGI has steadily and significantly increased over the last six years. On the other hand, the revenue from the royalties of printed annals and archives proceedings as well as books in the ISPRS Book series has become insignificant. CHF 476 was recorded from the 2021 royalties of the new *ISPRS Open Journal of Photogrammetry and Remote Sensing* (launched in January 2021). It is anticipated that this journal will become another source of Society's income.

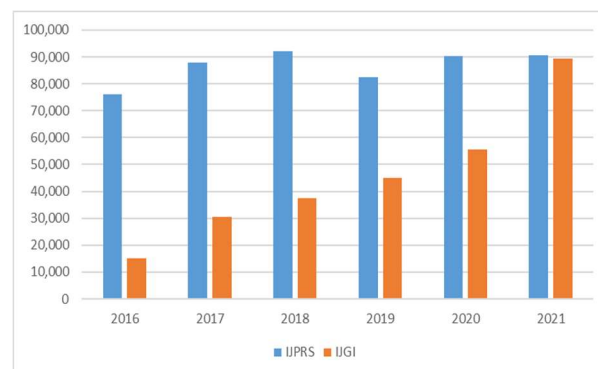


Figure 6. Publication income (2016-2021)

Contribution from Major ISPRS Events

As a result of the contributions of the organizers of the major ISPRS events over the last 6 years, the Society has received a total of CHF 193,953 financial contributions from 2016 ISPRS Congress, 2015, 2017 and 2019 Geospatial Weeks (GSW), and 2018 Technical Commission Symposia. The contribution of CHF 86,592 received from 2016 Prague Congress (up from CHF 82,441 received from the 2012 Melbourne Congress) and CHF 51,605 from the five Technical Commission symposia held in 2018 (up from CHF 36,090 from the eight symposia held in 2014 due to a large amount of CHF 24,639 from TC III symposium) contributed to the increased income of this quadrennial period. Three Geospatial Weeks made a total of CHF 55,756

contribution, on an increasing trend (CHF 5,409 from GSW'15, CHF 21,680 from GSW'17, and CHF 28,677 from GSW'19), indicating that over CHF 20,000 can be anticipated from future GSWs.

ISPRS Investments

Figure 7 shows values for each of the investment funds from 2006 to 2021. The Society's bond investments (the first four custody accounts listed in the legend) yielded a modest average of CHF 2,687 in dividends each year on a decreasing trend. These funds were re-invested in the bond funds from which they were earned. The total value of these investments on 31 December 2021 was CHF 583,323, which is a slight increase of about 0.4% from the valuation at the beginning of this quadrennial period (CHF 558,964).

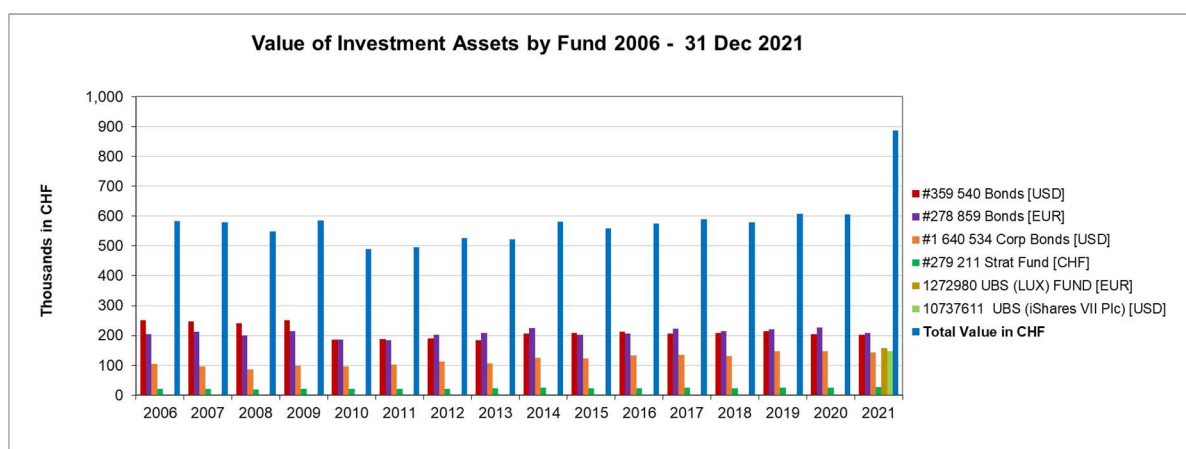


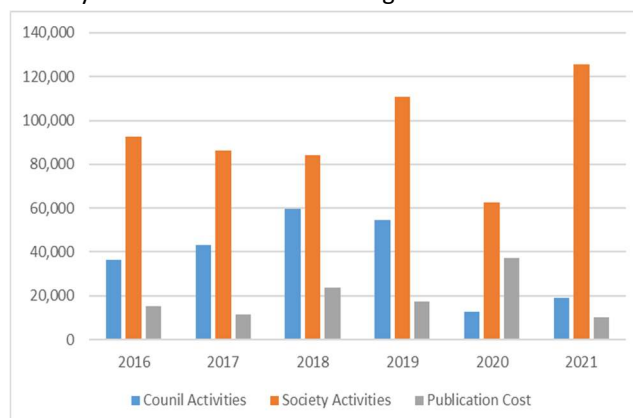
Figure 7. Value of ISPRS investment assets by fund (2006-2021)

An investment of an additional 300,000 CHF was made in two exchange-traded funds in December 2021: one in US stock market – “iShare VII Plc - iShare Dow Jones Industrial Average UVITS ETF USD-acc”, and one in European stock market – “UBS (Lux) Fund Solutions - EURO STROXX 50 UCITS ETF (EUR)”. The total valuation of these funds was 303,692 CHF as of 31 December 2021 and there was no sufficient data to evaluate their performance.

Expenses

The Society's expenditures are mainly for supporting council activities, investing in Society activities, and covering ISPRS journal editors' honoraria not paid by publishers per agreements. Figure 8 presents the level of expenditure of each year over the last six years by category. Notably, the significant low spending in 2020 was due to the impact of COVID-19 that resulted in many cancelled activities and the high spending in Society's activities in 2021 was because the payments for 2020 U.V. Helava Award and Jack Dangermond

Award, of which the donor's contributions were booked in revenue, as well as the lump sum payment to the French Society of Photogrammetry and Remote Sensing for the cost of organizing 2020 and 2021 Virtual Congresses. Council spent less in both 2020 and 2021 mainly because almost all meetings were held in Zoom



since the pandemic started.

Figure 8. ISPRS major spending by category (2016-2021)³

³ The actual spending in 2021 was CHF 425,331, which included the expenses of CHF 299,534 for organizing 2020

and 2021 Virtual Congresses. This amount was not a “regular” expense and was not included in the bar graph.

An analysis of the “cost of doing business”, total expenses plus in-kind support, was included in the two previous treasurer’s reports. Over the last six years, the total ISPRS operational expenses have been substantially reduced by the following in-kind contributions:

- Support from ISPRS members and event organizers to host ISPRS Council Meetings, which consists of estimated out-of-pocket expenses.
- The President's successful application to the German Research Foundation (DFG) to cover the cost of his travel/subsistence and a part-time secretary's salary throughout the six-year period (estimated CHF 364k).
- The First Vice President was also able to secure similar support from his employer during the same period.
- Council continued to make maximum use of Skype (later Zoom) services to minimise travel expenses, and all other Council Members continued to use alternate funds to support ISPRS travel wherever possible to minimise the impact on the Society’s accounts.

These contributions have greatly helped reduce the expenditures of the Society and helped the Society to invest more in activities that benefit the entire ISPRS community. Some of these investment measures include 1) increased funds available for ISPRS Scientific Initiatives (from CHF 40,000 to CHF 70,000), 2) new ISPRS Educational and Capacity Initiatives established in 2017 (started 2018), 3) financial support to TCPs for attending joint meetings, 4) supporting authors from developing countries to publish in ISPRS OA journals, 5) new ISPRS keynote program which covers Keynote Speaker’s travel expenses, and 6) supporting the organization of ISPRS events in terms of ConfTool cost and travel grants.

Financial Systems and Operations

Financial Policies

Financial operations are guided by [ISPRS Bylaws \(BYLAW XV - Finances\)](#), [ISPRS Financial Policy](#), and [ISPRS Spending Policy](#). The ISPRS Financial Commission reviews and approves the Treasurer’s Annual Reports, examines and audits accounts provided by the

Credit Card Payments

Credit card payments can be made online using the service provided by Copernicus GmbH by all categories of member through a portal provided in the ISPRS Payment Instructions, which is attached to annual membership invoices. Working together with Copernicus IT, some improvements were made, including an email advice sent to the Treasurer for each

Treasurer every year, and advises the council on annual budgets. All policy documents are available from the Guidelines section of the ISPRS website.

Accounting Systems

The ISPRS accounting system consists of a hybrid Microsoft Access database and Excel spreadsheets, with origins dating back to the 2000-2004 Congress Period. This system requires maintenance by both the Secretary General and the Treasurer, and it contains functions that require time consuming “work-around” solutions. Several incremental developments took place in the previous Congress Period, including the streamlining of bank reconciliation / accounting spreadsheets in Excel via a macro, as well as the production of a regular Treasurer’s report via a Python script to provide the Council with up-to-date information on membership subscriptions. No additional developments have been made to this accounting system during this Congress Period.

Daily Banking

Day-to-day banking with the ISPRS bank, UBS in Zurich, has generally worked well throughout this Congress Period with the assistance of the Treasurer’s Assistant. Because of UBS’s restricted service and offering to the Treasurer’s residence country (the incumbent Treasurer is a resident in Canada), only limited access to ISPRS bank accounts, “view only” access, was granted to the Treasurer, and the Treasurer’s Assistant was added to the ISPRS corporate register to fully execute e-banking (including payments) to execute the Treasurer’s instructions. In general, e-banking is still simple and efficient and helps to minimise the cost of transactions, since almost all transactions have been done through wire transfers with a few completed using cheques. However, high-profile publicity surrounding various tax scandals, and the subsequent response of governments towards offshore banking has continued to create significant complications for the ISPRS relationship with UBS at various points over the last six years as international banking regulations have been increasingly restrictive, making transfers to certain countries difficult. In particular, the lack of a permanent address for ISPRS Headquarters, the Society’s incorporation in the USA State of Maryland, and the nomadic movements of the ISPRS Treasurer every four years have continued to be problematic in establishing a stable banking basis in Switzerland.

online payment made and reconciling the difference between the invoiced amount and the amount shown in online payment system when arrear payment is involved. The Society pays a fixed amount handling fee, plus credit card fees charged (currently 2.35% for American Express, 3.57% for Visa and JCB, and 3.56% for MasterCard) and VAT. For each payment, this presents about 5-6% of the payment amount. During

this Congress period, an increasing number of members (about 10% in 2020) have used the service to pay their subscription fees.

Incorporation and Tax

The Society's incorporation in the State of Maryland, USA as a not-for-profit (that is, tax exempt) organization has worked reasonably well for a Treasurer not resident in the USA. However, it adds additional responsibility to the ISPRS Treasurer, and requires professional assistance in the USA to complete and file tax return and submit annual financial and property forms, most notably the IRS-990 and the State of Maryland Annual Report / Personal Property forms. As with changes in banking regulations, there are changes in these forms each year that, if not submitted, can result in ISPRS being "not in good standing" or "forfeited" and losing its standing and tax-exempt status.

Summary

Overall, the Society's financial status continues to be healthy in terms of income, but raises concerns of continuous financial asset accumulation, as shown by the increased divergence of income and expenditure up to 2019, which is different from the convergence trend of the last quadrennial period. The Society's net worth by the end of December 2021 was CHF 957,362 (up from CHF 617,896 in the end of 2015). The stable income from membership subscription fees and revenue generated from publication royalties have continued the increase of the total assets which once again require attention of Council to continue to seek solutions and investigate strategic investments.

Although Council has been continuously working on connecting and communicating with those members that remain in arrears, increasing percentage of members in arrear and falling income from Sustaining Members will require the next Council's further attention for developing strategies for recognizing members, rewarding long-term members, and providing more member-only benefits.

The current Council had launched some new investment measures (e.g., APC support to developing

country authors, keynote program, free use of ConfTool services by ISPRS events) in 2018 but their implementation impacted by the COVID-19 pandemic. The next Council is encouraged to continue to monitor and evaluate the performance of these new measures once the pandemic is over, as well as developing new ways of investing the Society's financial resources.

One of the recommendations from the previous Treasurer's report was to consider the streamlining of the current accounting practice and membership management using an appropriate online, off-the-shelf solution. The current Council decided to not make changes. However, it is worth investigation by the next Council to replace the current MS Access based accounting and membership management systems.

As the duration and impact of the COVID-19 pandemic is unclear currently, so too is the related fiscal impact on the Society. Nevertheless, the incumbent Treasurer believes that the Society is well-positioned to face the near-term financial challenges that may lie ahead and to continue working towards its mission of advancing the photogrammetry, remote sensing and spatial information sciences through international cooperation in research, development and education for the benefit of society and in general for environmental sustainability.

Acknowledgement

My work could not be done without the valued assistance of Dan Brooking-Coker throughout my six-year term of office as ISPRS Treasurer. I am greatly indebted to the previous Treasurer, Jon Mills, for his immense help and patience in making a smooth transition and answering my questions after the handover. A special gratitude goes to my colleagues in ISPRS Council for their continuous support and good spirits. Finally, the support of the ISPRS Financial Commission, consisting of Jon Mills, George Vosselman, and Manos Baltsavias for the period of 2016-2021 and George Vosselman, Fulvio Rinaudo, and Petri Ronnholm for the period of 2021 to 2022, are gratefully acknowledged.

Appendix

I. 2022 budget and quarter-one statement of income and expenditure by category

	Budget	JAN	FEB	MAR	Total Spent	Under/Over Projection
Expenditure	374,700	3,538	28,239	1,346	33,123	341,577
Council Activities	61,300	2,522	0	0	2,522	58,778
Society Activities	293,200	1,000	24,280	0	25,280	267,920
Publication	14,400	0	3,958	0	3,958	10,442
Bank and Loans	5,800	15	0	1,346	1,362	4,438
Income	369,900	29,200	34,841	10,673	74,713	295,187
Subscriptions	107,500	28,390	10,723	6,124	45,237	62,263
Royalties	160,300	0	23,373	4,549	27,922	132,378
Congress and GSW	0	0	0	0	0	0
Symposium	0	0	0	0	0	0
Other Income	11,800	810	0	0	810	10,990
Bank and Loans	90,300	0	744	0	744	89,556

II. Historical record of membership fees collected

Year	Collected Fees by Member Type (CHF)				Total (CHF)
	OdM	StM	RM	AM	
1997	61,111	44,729	800	1,400	108,040
1998	52,763	31,863	200	1,300	86,126
1999	82,082	34,500	300	1,700	118,582
2000	65,918	28,294	1,577	1,200	96,989
2001	59,246	43,985	1,555	2,532	107,318
2002	55,659	40,426	364	3,200	99,649
2003	71,373	33,161	486	949	105,969
2004	75,513	42,662	1,944	6,238	126,357
2005	63,195	51,936	1,283	1,817	118,231
2006	74,070	58,945	1,462	3,207	137,684
2007	58,275	47,729	858	2,482	109,344
2008	71,510	62,473	1,110	2,382	137,476
2009	64,741	50,069	1,103	1,334	117,247
2010	81,386	48,679	1,555	2,683	134,303
2011	60,174	46,520	419	599	107,713
2012	65,271	50,924	2,437	6,198	124,831
2013	65,414	50,050	780	2,931	119,174
2014	72,647	38,917	1,060	1,278	113,901
2015	63,504	49,081	1,085	4,395	118,065
2016	81,825	35,752	1,272	1,721	120,570
2017	59,433	30,078	592	2,263	92,366
2018	68,525	44,907	1,185	1,678	116,295
2019	69,642	51,551	1,001	828	123,022
2020	60,495	34,480	658	1,021	96,654
2021	26,133	7,268	0	0	33,401

Note: Exchange rates between the USD and CHF and between the Euro and CHF were calculated for each year according to x-rates.com (<http://www.x-rates.com>) and a few exchange forecasting reports (incl. USB) since 2016.

Report of Financial Commission Chairs, Jon Mills, 2016-2021 and George Vosselman, 2021-2022, to the General Assembly for the Term 2016-2022

Composition of the Financial Commission

The Financial Commission of ISPRS in the period 2016-2021 was composed of:

- Jon Mills, chair, Newcastle University, United Kingdom
- George Vosselman, member, University of Twente, the Netherlands
- Emmanuel Baltsavias, member, ETH Zürich, Switzerland

For the period 2021-2022, the Financial Commission was composed of:

- George Vosselman, chair, University of Twente, the Netherlands
- Fulvio Rinaudo, member, Politecnico di Torino, Italy
- Petri Rönholm, member, Aalto University, Finland

Approval of accounts

At each fiscal year from 2016 to 2021, the Financial Commission closely examined all Society accounts included in the Treasurer's report, including income and expenditure and the evolution of the assets, dividends and cash accounts. The provided Treasurer's accounts and reports were detailed, generally well documented and easy to follow. This allowed a thorough understanding of the various financial flows throughout each period, on a year by year basis. The Financial Commission thanks the ISPRS Treasurer, Songnian Li, and his team for their important and thorough work in this regard. The year 2021 has been exceptional

because of the COVID-19 pandemic which has caused a notable loss of 262 872 CHF to the Society. However, the Financial Commission appreciates the actions of the ISPRS Council during these difficult times. The Financial Commission confirms that the 2016 to 2021 ISPRS accounts show no apparent accounting errors.

Delivery of documents

Following the submission of accounts by the ISPRS Treasurer for each of the fiscal years 2016 to 2021, the Financial Commission responded with comments and questions as per the dates reported in Table 1. Simultaneous to the analysis of the previous years' accounts, the proposed budget for the forthcoming year (i.e. 2017 – 2022), together with a four-year forecast, was also submitted by the Treasurer and scrutinised by the Financial Commission, with feedback provided on the same dates (Table 1). Following discussion, the accounts and budget were signed off by the Financial Commission as per the date shown in the final column in Table 1. It is apparent from Table 1 that the timeline associated with setting and approving the annual Society budget has meant that it has gone unapproved until Quarter 2 or Quarter 3 of the year to which it relates. Moreover, the timescale for the submission and approval of accounts has necessitated the Society's accountants to regularly apply for deferral of the ISPRS' Maryland annual tax return (early April annual deadline).

Fiscal Year of accounts / budget	Date accounts first received by FC	Date of first response by FC	Date final revisions received by FC	Date signed off by FC
2016 / 2017	29 th April 2017	15 th May 2017	18 th May 2017	19 th May 2017
2017 / 2018	29 th June 2018	31 st July 2018	25 th Sept 2018	26 th Sept 2018
2018 / 2019	23 rd February 2019	13 th March 2019	27 th Aug 2019	9 th Sept 2019
2019 / 2020	22 nd February 2020	13 th March 2020	21 st March 2020	30 th March 2020
2020 / 2021	17 th February 2021	12 th March 2021	15 th April 2021	16 th April 2021
2021 / 2022	10 th February 2022	17 th Feb 2022	23 rd Feb 2022	23 rd Feb 2022

Table 1: Timeline for scrutinising and signing off annual accounts and budgets.

Over the years, the Financial Commission has repeatedly made recommendations regarding the budget and cash assets which were not followed up by the Treasurer. While the Financial Commission recognizes it only has an advisory role regarding the budget, the lack of explanations for not following up recommendations demotivates the Financial Commission to continue its role.

Recommendation #1:

For the period 2023-26, the ISPRS Treasurer provides the budget to the Financial Commission two months in advance of the fiscal year to which it relates such that the Financial Commission can examine it and pass it on to the Council one month before the start of the

budgeted fiscal year, as is requested in Bylaw XV.7a adopted in 2019.

Recommendation #2:

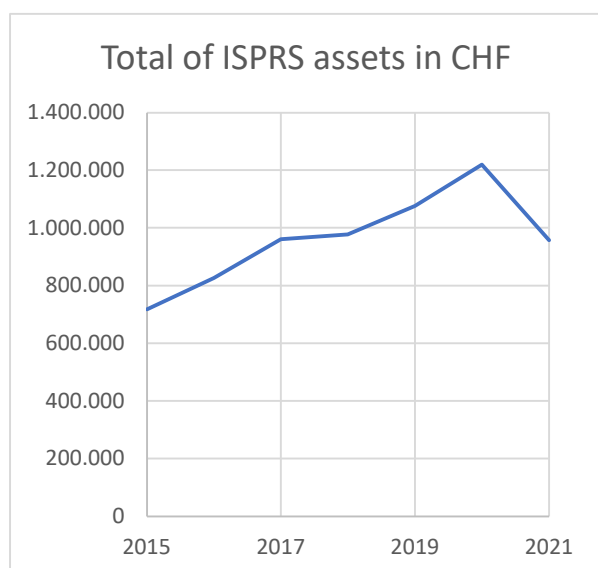
For the period 2023-26, the ISPRS Treasurer provides the fiscal accounts to the Financial Commission by the end of February in the following year (i.e. before 28th February of Accounting Year +1).

Recommendation #3:

The ISPRS Treasurer provides a written clarification to the Financial Commission whenever the Commission's recommendations are not followed up.

Financial policy

The ISPRS financial policy, as published on <https://www.isprs.org/documents/guidelines/financial-policy.aspx>, provides guidelines for financial planning and budgeting in Part 1. It recommends in article E: *"Conservative Budgeting: It is prudent financial planning to under-budget for income and over budget for expenses."* In the past term, the ISPRS Treasurer strictly adhered to this policy for every budget item, in particular for expenses. As a consequence, the total of the budgeted expenses was a gross overestimation of the incurred expenses and ISPRS was generating annual profits of over kCHF 100 in the pre-covid years 2016-2019. This has resulted in a vast accumulation of assets. The Financial Commission repeatedly recommended to budget more realistically and considers the growth of the ISPRS assets not in the interest of the ISPRS members and not supporting the Society's mission. It should be noted that the decline in assets in 2021 is the consequence of waiving the 2021 member fees and already taking costs for the online congresses in 2020 and 2021, and is not a result of a structural change in the budgeting policy.



The financial policy further recommends in article I, *"Custody Accounts: It is the desire of the Council to maintain a reserve within the custody accounts equivalent to the full, unhindered operation of the Society for a quadrennial term. Based on the four-year budgeting process, the target level for total custody account reserves is a minimum of CHF 500k."* The current ISPRS assets significantly exceed this minimum amount. Even after the 2021 fee waiver for all members, total assets still exceed the sum of all expenses of the years 2016-2019 by more than kCHF 200.-. Furthermore, the Financial Commission observes that the annual income from royalties paid by the journal publishers grew significantly from kCHF 27.- in 2016 up to kCHF 173.- in 2021, a trend which is expected to continue at least for the duration of the current publishing contracts. This establishes the journal revenues as a very significant source of income next to the membership fees and income from ISPRS events. This larger diversification of income has increased the resilience of Society finances, making it questionable whether reserves are still required to match the costs for the operation of the Society for a full quadrennial term.

Recommendation #4:

Given the diversification of income due to the reliable and increasing revenue from journal publishers, the ISPRS Council is recommended to review the financial policy regarding the desired reserves on custody accounts.

Recommendation #5:

The ISPRS Council is recommended to adopt a more realistic budgeting policy to avoid continued structural growth of the Society's assets.

Recommendation #6:

The ISPRS Council is recommended to put in place a forward strategic plan for the sustainable and controlled reduction of the Society's assets and for the benefit of the Society and its membership. The Financial Commission recognises and accepts that this will involve annual budgeting to make a loss. Care must be taken that additional expenditure does not become a part of compulsory ISPRS' structural expenses, but is associated with activities that directly benefit members, such as scientific initiatives, awards, travel grants, summer schools, competitions, etc.

Recommendation #7:

The ISPRS Treasurer is recommended to review the cash reserves annually and reduce them to, and maintain them at, the target level specified in article H. of the Financial Policy, Part 1.

Members in arrears

With a number of Ordinary Members now anything up to 20 years in arrears, it seems obvious that many of these members are no longer engaged with the Society. Two years ago, the Financial Commission recommended Council to take action at the next General Assembly to remove the worst non-payers from the membership, as appropriate. The Financial Commission understood that Council will propose to amend the by-laws to allow this.

Recommendations to the 2016 General Assembly

The Financial Commission noted that two recommendations made by the previous Financial Commission have not been addressed in the past term. The Financial Commission requests the future Council to consider these recommendations:

Recommendation #8:

Incorporation and compatibility with banking: The future Council are asked to consider the possible co-location of the Society's incorporation with its banking activity, either through registering ISPRS as an entity in Switzerland, by transferring its banking operations to the USA, or by moving both to a mutually convenient location.

Recommendation #9:

Overhaul of accounting system: With a total of only 180 members in all categories, a much simpler and more efficient on-line method to record and manage member payments, etc. than is currently in operation should be feasible. The incoming Treasurer, together with the Secretary General's office should consider the

streamlining of the current practice to an appropriate on-line, off-the-shelf solution.

Term of the Financial Commission

Bylaw XIV currently states "*The outgoing Financial Commission shall continue to serve after the Congress to ensure that the outgoing Treasurer hands over the accounts and funds of the Society to the new Treasurer within two months of the Congress. The new Financial Commission shall replace the outgoing Financial Commission at the same time as the changeover of Treasurers, and report to the Council that the changeover has been satisfactorily accomplished.*" The Financial Commission supports the custom that the Past Treasurer continues as chair or member of the Financial Commission as the Past Treasurer is very well introduced to the financial processes and challenges of the ISPRS. However, the consequence of the current Bylaw XIV is that the Past Treasurer, as a member of the Financial Commission, becomes responsible for approval of the accounts of the last year of his/her treasurership.

Recommendation #10:

The Financial Commission recommends adapting Bylaw XIV such that the outgoing Financial Commission continues to serve until approval of the accounts for the Congress year is complete. Council may consider whether the outgoing Financial Commission will also advise on the budget of the year after the Congress, or whether this is left to the incoming Financial Commission. In the latter case, two Financial Commissions will be active at the same time.

Report of the Editors-in-Chief on ISPRS Journal of Photogrammetry and Remote Sensing Qihao Weng, 2016-22, Clément Mallet, 2021-22, Derek Lichti, 2016-20

Overview of Major Developments

The Journal experienced significant growth in terms of the number of new submissions and the number of published articles. There were more than 1,800 new papers submitted in 2021 and the projection for 2021 is of similar magnitude. The number of published papers is well over 200 per year. To handle this load, the editorial team now comprises two Editors-in-Chief and 23 Associate Editors. The latter increased from 13 at the end of the 2012-2015 reporting period. The Editorial Advisory Board was also expanded in 2019. Journal performance has improved both in terms of efficiency and quality. Article handling time decreased every year during the reporting period. The Impact Factor more than doubled (from the end of the previous reporting period) to 8.979, which places the Journal first out of 52 in the category of Physical Geography and second out of 32 journals in the Remote Sensing category.

The winner of the U.V. Helava Award for the best paper during 2016-2019 period has been awarded to "*Bundle adjustment with raw inertial observations in UAV applications*" by Davide Antonio Cucci, Martin Rehak and Jan Skaloud. In addition, the winner of the Best

Paper Award in 2020 has been awarded to "*Cloud removal in Sentinel-2 imagery using a deep residual neural network and SAR-optical data fusion*" by Andrea Meraner, Patrick Ebel, Xiao Xiang Zhu and Michael Schmitt. The winner of the Best Paper Award in 2021 has been awarded to "*ULSD: Unified line segment detection across pinhole, fisheye, and spherical cameras*" by Hao Li, Huai Yu, Jinwang Wang, Wen Yang, Lei Yu and Sebastian Scherer.

Manuscript Handling

Submitted Manuscripts

The number of manuscripts submitted during the reporting period is tabulated below. The year 2016 marked the end of three years of stability in terms of the number of submissions at around 650 (653 in 2014 and 658 in 2015). The Journal experienced a huge increase in 2017, possibly due to the increase in the Impact Factor, and continued growth thereafter. As of February 21, 275 papers have been received in 2022, which projects to more than 1,935 papers for the year. The Journal did not experience a decrease during the Covid-19 pandemic.

Table 13.1. Manuscripts submitted to the Journal.

Year	2016	2017	2018	2019	2020	2021
# submitted manuscripts	651	1,048	1,106	1,312	1,534	1,806
% increase from previous year (658 in 2015)	-1	61	6	19	17	18

Manuscripts are submitted to the Journal by Elsevier's EES online system. This system was used prior to a move to Elsevier's Evise system. The Journal was moved back to EES in 2016 due to many problems experienced with Evise. Since November 9th, 2020, the Journal has been migrated from EES to EM (Editorial Manager) system.

Accepted Manuscripts

Metrics concerning accepted manuscripts are provided below. The number of papers accepted has increased since 2016, although 2019 was an anomalous year. The acceptance rate has decreased by nearly 10% in the past five years. The increased Impact Factor makes the Journal an attractive target for authors hoping to publish their papers. This has led to an increase in the number of submissions, as mentioned. It has also led to an increase in low quality and out-of-scope manuscripts, hence the high rejection rate.

Table 13.2. Journal acceptance statistics.

Year	2016	2017	2018	2019	2020	2021
# final decisions	621	947	1,165	1,312	1,534	1,806
# accepted papers	166	208	253	223	264	255
# rejected papers	453	737	908	1,079	1,269	1,506
# withdrawn/removed papers	23	19	9	9	16	10
Acceptance rate (%)	27	22	22	17	17	15

Published Manuscripts

The number of papers published and the total journal pages (see table below) have also increased

considerably since 2016, though 2018 was an anomaly. A double volume (145-A and 145-B) was published at the end of 2018 for two theme issues, so there were more papers published in this year.

Table 13.3. Journal publication statistics.

Year	2016	2017	2018	2019	2020	2021
# volumes	12	12	12	12	12	12
# papers	182	201	280	229	263	263
# pages	2,268	2,760	3,612	3,100	3,840	3,978

Unfortunately, two papers published in 2018 were retracted due to academic misconduct. The first was a case of research results being published in two journals. The second was a case of multiple submissions of substantially the same work to three journals. In both cases, the authors voluntarily retracted the articles. Retraction notices were published accordingly.

Theme Issues

The table below summarizes the Theme Issues (TIs) and Theme Sections (TSs) published in the Journal for the

2016-2021 period plus early 2022. There has been 15 published TIs/TSs, averaging 2.5 special issue per year. The distinction between designations is on the basis of the number of accepted papers: a TI comprises 10 or more papers; a TS comprises less than 10 manuscripts. At least 1 TI proposal is received every month. Most of these proposals are formulated by experts out of the field of the journal or correspond to topics already correctly covered by the Journal, which explains a high rejection of such proposals.

Table 13.4. Theme Issues.

Title	Guest Editors	Year	Volume(s)	Number of Articles	TI/TS
SI: Cloud/Web Mapping	Bert Veenendaal Maria Brovelli Lixin Wu	2016-03-24	114C	6	TS
SI: State-of-the-art	Christian Heipke Marguerite Madden Zhilin Li Ian Dowman	2016-03-31	115C	12	TI
SI: Multi-dimensional modeling, analysis and visualization	Francesc Antón Castro Arzu Çöltekin Éric Guilbert Chris Pettit	2016-05-17	117C	7	TS
SI: 36th ISRSE Special Issue	Bjorn Waske John Trinder	2016-09-13	119C	4	TS
SI: Geospatial Week 2015	Ian Dowman Nicolas Paparoditis	2017-04-20	127C	10	TI
SI: Geospatial Computer Vision	Jan Dirk Wegner Devis Tuia Michael Ying Yang Clément Mallet	2018-04-18	140C	11	TI
SI: UN Sust Dev Goals	John Trinder Sisi Zlatanova Jie Jiang	2018-07-10	142C	5	TS
SI: Point Cloud Processing	Ruisheng Wang Bisheng Yang Florent Lafarge Suya You	2018-08-07	143C	21	TI
SI: Deep Learning RS Data	Giorgos Mountrakis Jun Li Xiaoqiang Lu Olaf Hellwich	2018-10-05	145PA	13	TI
SI: Latin America Issue	Raul Q. Feitosa Jaime Hernandez	2018-10-22	145PB, 146C, 147C, 148C	18	TI

	Carlos M. Scavuzzo Luiz E.O.C. Aragão Claudia de Almeida				
VSI: Big Geo Data	Charles Toth Jan Dirk Wegner Oni Mutanga Cheng Wang	2020-11	156C	6	TS
VSI: African Sustainability	Onesimo Mutanga Elfatih Mohamed Abdel Rahman Lalit Kumar Qihao Weng	2020-11	157C, 159C, 161C	13	TS
VSI: Multi-view Satellite Image Processing	Rongjun Qin Pablo d'Angelo Naoto Yokoya Jan Dirk Wegner	2021-06	167C ~ 183C	6	TS
VSI: Muti-Modal Learning in Photogrammetry and Remote Sensing	Michael Ying Yang Loic Landrieu Devis Tuia Charles Toth	2021-06	167C ~ 176C	10	TI
VSI: 3D Modeling of Indoor Environments	Zhizhong Kang Cheng Wang Kourosh Khoshelham Ville Lehtola	2022-01	175C ~ 183C	13	TS
New Generation of Hyperspectral Remote Sensing Data in the Study of Global Agriculture and Vegetation	Prasad S. Thenkabail Alfredo Huete Eyal Ben-Dor	Submission deadline: October 31, 2021	177C ~ (In process)	5	
Street-level Imagery Analytics and Applications	Fan Zhang Jan Dirk Wegner Bisheng Yang Yu Liu	Submission deadline: 31 January 2022	182C ~ (In process)	5	

Manuscript Handling Time

Since 2019, the ISPRS Journal has adopted the Virtual Special Issues (VSI) model for theme issues. VSI is an online-only grouping of Special Issue articles traditionally assigned to a single Special Issue. Each article in a VSI is assigned a unique identifier and then published in a regular journal issue as soon as available. The unique identifier allows us to simultaneously add the article to a VSI on ScienceDirect which is gradually built up as individual articles are published online. Articles grouped together in a VSI retain their original citation details.

The editorial and publication time in the period of 2016-2021 continues to be shortened, as can be seen in the table below. These improvements can likely be attributed to a number of factors including: the appointment of additional editors; the appointment of the Editorial Advisory Board; and weekly email reports about the status of each paper that are sent to editors (It unfortunately has been discontinued).

Table 13.5. Manuscript handling time statistics for published articles.

	Submission to First Decision (weeks) ¹	Submission to Acceptance (weeks) ²	Submission to First Online (weeks) ³	Submission to Final Publication (weeks) ⁴
2016	13.12	29.82	33.46	41.69
2017	12.6	27.71	30.12	36.63
2018	12.0	27.19	29.69	39.04
2019	11.4	26.7	28.11	32.55
2020	11.1	24.3	26.9	31.7
2021	9.7	22.1	25.1	30.2

¹Submission to First Decision is the average total time, in weeks, between submission and first decision.

²Submission to Acceptance is the average total time, in weeks, between submission and editorial outcome “Accept”.

³Submission to First Online is the average total time, in weeks, between submission and publication first online.

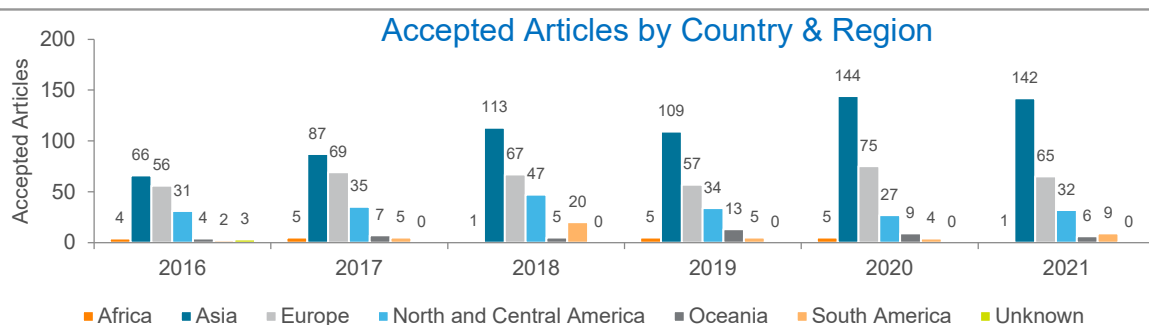
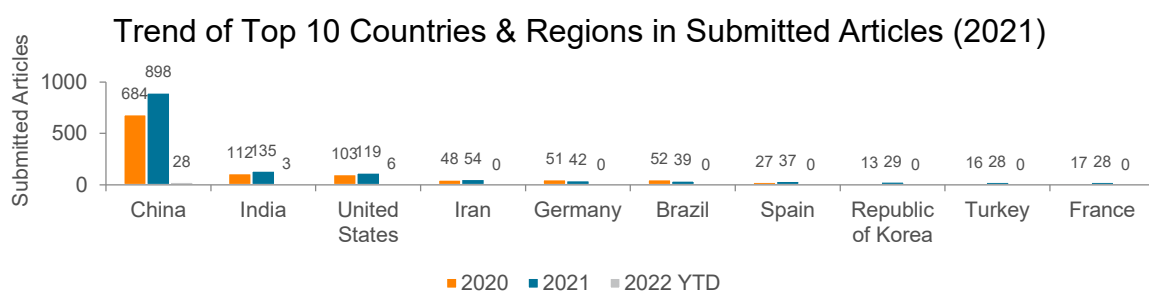
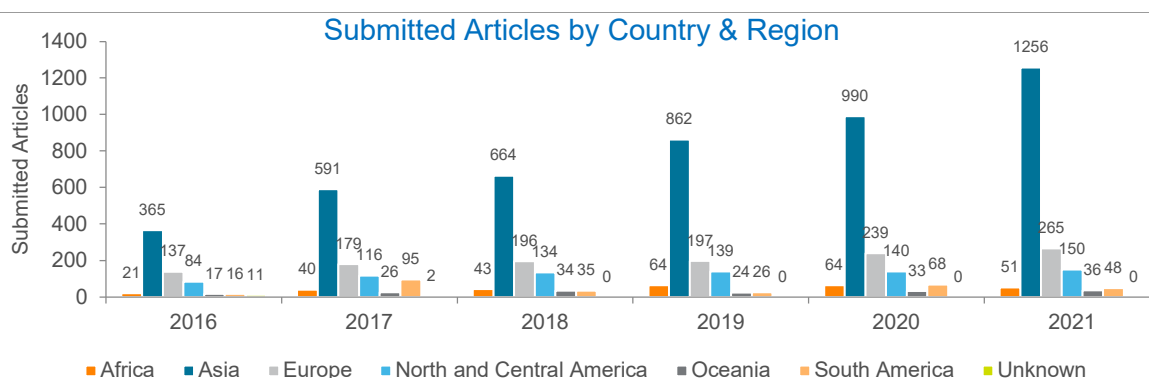
⁴Submission to Final Publication is the average total time, in weeks, between submission and issue dispatch (print) or final publication date online (e-only).

The desk-reject time, performed by the Editors-in-Chief, is 0.2 to 0.6 week. This fast desk-rejection strategy allows to significant limit the load of both EiC and AE while proposing a swift redirection of many manuscripts to more adequate journals.

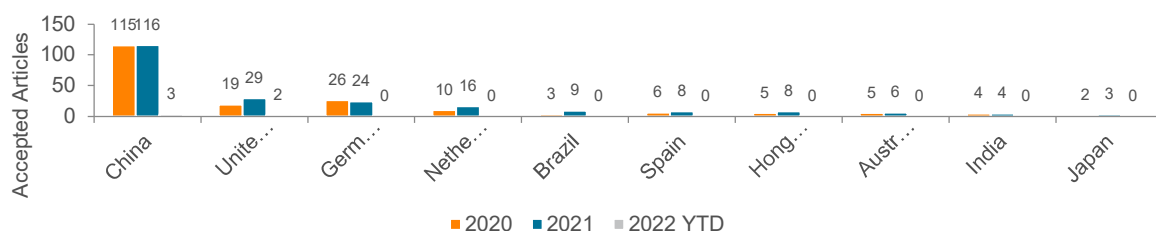
Country of Origin

The figures below provide a graphical summary of the country of origin of the corresponding author. Though the Journal received manuscripts from all populated continents, Asia was the major contributor, followed by

Europe and North and Central America. From 2016 to 2021, Asia experienced the most growth (by more than 244%). Europe had also increased the submission by over 93%, while the North and Central America by nearly 79%. South America remained stable in submissions, except for 2017 when there was a planned special issue in 2018. The largest contributing countries were China, India, and USA. In terms of the number of accepted papers, the main contributors were also Asia, Europe and North and Central America, with the top three countries of China, USA, and Germany.



Trend of Top 10 Countries & Regions in Accepted Articles (2021)



Access to Articles

Papers are available on-line through the Elsevier website

<http://www.sciencedirect.com/science/journal/09242716/118>.

As can be seen below, the number of downloads increased each year of the reporting period. The largest increase was experienced in 2018.

Table 13.6. Journal download statistics.

Year	2016	2017	2018	2019	2020	2021
# downloads	507 196	588 370	759 994	805 934	963 306	977,426
% increase from previous year (453978 in 2015)	12	16	29	6	19.5	1.47

Impact

The Impact Factor (IF) is a two-year measure of Journal quality published annually in the Journal Citation Reports by Clarivate Analytics. Over the past four years the impact factor of the Journal increased significantly from 3.132 in 2014. The Journal is ranked second out of

around 32 journals in the Remote Sensing category in terms of IF. The five-year impact factor also increased each year from 4.652 in 2014. The CiteScore increased from 5.41 in 2015 to 14.9 in 2020. The total number of citations of Journal articles reached over 18,000 in 2020.

Table 13.7. Journal impact factor and citations.

Year	2015	2016	2017	2018	2019	2020
Impact Factor	4.118	6.387	5.994	6.942	7.319	8.979
Five-year impact factor	5.063	6.457	6.592	7.856	8.597	9.948
CiteScore	5.41	9.2	11.2	10.6	11.7	14.9
Total # citations	5125	7720	8535	11 576	13 946	18,026

Editorial Team

Editors and Board

The editorial team comprises two Editors-in-Chief (EICs) and 23 Associate Editors (AEs) with at least one from each populated continent. Derek Lichti finished his second four-year term as EIC at the end of 2020. Qihao Weng continues his EIC role and Clément Mallet has taken over for Derek.

Long-serving AE Konrad Schindler, who has done an excellent job since 2011, retired from duties in June 2020. Konrad was replaced by Jan Dirk Wegner. Two additional AEs began duties in April 2020, Michael Ying Yang and Jungho Im. Mariana Belgiu has been selected

an AE since January 2021 to replace the position that Clément Mallet left. At the end of December 2021, Professors Sanna Kaasalainen, Markus Gerke and Debra Laefer have also retired as Associate Editors (Markus and Debra being in 2022 Editors-in-Chief of PFG and Photogrammetric Record, respectively). Our Journal's readership has benefited greatly from their strong commitment to their editorial duties. Sanna has dutifully served the Journal for a total of ten years since 2012; while Markus and Debra began their service in 2018 and 2019, respectively, a time at which the journal experienced rapid growth in terms of the number of paper submissions. Thanks to their high standards for paper quality and rigorous peer review, these editors have made invaluable contributors to the Journal's

current high standing. All are recognized experts in their respective subject areas. Sanna handled submissions in laser scanning and natural environments. Markus oversaw papers in photogrammetry and semantic scene analysis. Debra was responsible for laser scanning and data fusion manuscripts.

Starting January 1, 2022, seven individuals have been appointed Associate Editors of the Journal. These individuals have been contributing to the ISPRS Journal for years as authors, reviewers, and/or guest editors. We are looking forward to working with them, and together, to bringing the journal a greater success. Dr. Ronny Hänsch will oversee paper dealing with SAR and

semantic scene analysis, Yuhong will handle remote sensing papers dealing with geospatial analysis and ecosystem modelling, Dr. Florent Lafarge will be in charge of papers related to 3D modelling, surface reconstruction and point cloud processing, and Prof. Rongjun Qin will also focus on 3D modelling but also on change detection and land-cover classification. Dr. Lars Waser will oversee contributions in LiDAR and satellite image time series and natural environments; Dr. Martin Weinmann will bring his expertise in point cloud processing and semantic scene analysis, and Prof. Gui-Song Xia will handle from low-level to high-level optical image understanding.

Table 13.8. Editors-in-chief.

Name	Institution	Country	Subject areas handled	Period served
Qihao Weng	The Hong Kong Polytechnic University / Indiana State University	China / United States of America	Remote sensing	2015-2009-2014 as AE
Clément Mallet	Institut National de l'Information Géographique et Forestière	France	Laser scanning, Photogrammetry, Computer vision	2021-

Table 13.9. Associate Editors

Name	Institution	Country	Subject areas handled	Period served
Cláudia Maria de Almeida	National Institute for Space Research	Brazil	Remote sensing	2015-
Mariana Belgiu	University of Twente	Netherlands	Remote Sensing	2021-
Gang Chen	University of North Carolina at Charlotte	United States of America	Remote sensing	2018-
Michele Crosetto	Centre Tecnologic Telecomunicacions Catalunya	Spain	RADAR	2019-
Ronny Hänsch	German Aerospace Center (DLR)	Germany	SAR	2022-
Yuhong He	The University of Toronto	Canada	Remote sensing	2022-
Jungho Im	Ulsan National Institute of Science and Technology	South Korea	Remote sensing	April 2020-
Florent Lafarge	Inria Sophia Antipolis Mediterranean Research Centre	France	3D modelling/Laser scanning	2022-
Roderik Lindenbergh	Delft University of Technology	The Netherlands	Laser scanning	2018-
Bunkei Matsushita	University of Tsukuba	Japan	Remote sensing	2018-
Xin Miao	Missouri State University	United States of America	Remote sensing	2014-
Deepak Mishra	University of Georgia	United States of America	Remote sensing	2019-
Giorgos Mountrakis	State University of New York	United States of America	Remote sensing	2015-
Onesimo Mutanga	University of KwaZulu-Natal	South Africa	Remote sensing	2013-

Rongjun Qin	Ohio State University	United States of America	Remote sensing/computer vision	2022-
Vasit Sagan	Saint Louis University	United States of America	GIS, RADAR	2018-
Marco Scaioni	Politecnico di Milano	Italy	Photogrammetry	2018-
Devis Tuia	EPFL	Switzerland	Computer vision	2018-
Lars Waser	Swiss Federal Institute for Forest Snow and Landscape Research	Switzerland	Laser scanning/remote sensing	2022-
Jan Dirk Wegner	ETH Zürich/University of Zürich	Switzerland	Computer vision	June 2020-
Martin Weinmann	Karlsruhe Institute of Technology	Germany	Laser scanning/computer vision	2022-
Gui-Song Xia	Wuhan University	China	Computer vision	2022-
Michael Ying Yang	University of Twente	The Netherlands	Computer vision	April 2020-

The Journal's Editorial Advisory Board (EAB) was formed in 2019. Comprising internationally recognized scientists who have reliably served and/or contributed articles to the Journal, the EAB is primarily a reviewer resource for the editorial team. Each member is responsible for performing at least four reviews per year. It consists of 50 members appointed for a three-year term. The new EAB will be formed in June 2022 before the Congress.

Elsevier Staff

The EiCs generally had frequent contact with several Elsevier staff. Based in Amsterdam, the Publisher is responsible for the Journal and is our main contact. The EiCs have regular contact with the Publisher through

email and Zoom meetings are held every 4-6 months. Dr. Konstantinos (Kostas) Bischiniotis began duties as Publisher March 2020 after the resignation of Lan Song in 2019.

The Chennai-based Journal Manager is our contact for production matters as well as issues that arise with Elsevier's online submission system EES. The Publishing Content Specialist, who is based in Beijing, has been our contact for Theme Issues. However, the EiCs were informed in March 2020 that the Journal has been categorized as a C-level journal within Elsevier. As a result, the Journal Manager handles Theme Issues. The table below summarizes the staff for the reporting period.

Table 13.10. Elsevier contacts

Name	Service Period
<i>Publisher</i>	
Lan Song	March 2016-July 2016
Tobias Wesselius	August 2016-May 2017
Lan Song	June 2017-August 2019
Konstantinos (Kostas) Bischiniotis	March 2020-
<i>Journal Manager</i>	
Sundar Ananthakrishnan	2015-March 2018
Mark Anthony	April 2018-
<i>Publishing Content Specialist</i>	
Jia/Jessica Yang	November 2014- December 2020
Yixuan Zhao	December 2019-February 2020

The U.V. Helava Award

Background

The U.V. Helava Award, sponsored by Elsevier B.V. and Leica Geosystems AG, is a prestigious ISPRS Award, which was established in 1998 to encourage and stimulate submission of high-quality scientific papers by individual authors or groups to the ISPRS Journal, to

promote and advertise the Journal, and to honour the outstanding contributions of Dr. Uuno V. Helava to research and development in photogrammetry and remote sensing.

The Award is presented to authors of the best paper, written in English and published exclusively in the ISPRS Journal during the four-year period from January of a Congress year, to December of the year prior to the

next Congress. The Award consists of a monetary grant of SFr. 10,000 and a plaque. A five-member Jury, comprising experts of high scientific standing, whose expertise covers the main topics included in the scope of the Journal, evaluates the papers. For each year of the four-year evaluation period, the best paper is selected, and among these four papers, the best-of-best one to receive the U.V. Helava Award.

Jury

The U.V. Helava Award Jury was recently renewed and replaced. The composition of the U.V. Helava Award Jury for the 2021-2024 evaluation period is summarized in the table below. The Jury is led by one of the Editors-in-Chief, who serves as a non-voting member. Qihao led the Jury in 2016, 2018 and 2020, while Derek was the lead in 2017 and 2019. Clément led the Jury in 2021.

Table 13.11. UV Helava Award Jury members.

Name	Institute	Country
Songnian Li	Ryerson University	Canada
Xiaoli Ding	Hong Kong Polytechnic University	China
Helmut Mayer	Bundeswehr University Munich	Germany
Anjana Vyas	CEPT University	India
Peijun Li	Peking University	China

Winners

The four best papers, 2016-2019, selected by the Jury are:

The Best Paper Award for 2019 (volumes 147-158) was awarded to Roland Schwarz, Gottfried Mandlbauer, Martin Pfennigbauer and Norbert Pfeifer for their paper *"Design and evaluation of a full-wave surface and bottom-detection algorithm for LiDAR bathymetry of very shallow waters"*

<https://www.sciencedirect.com/science/article/pii/S0924271619300358>

The Best Paper Award for 2018 (volumes 135-146) was awarded to Steve Branson, Jan Dirk Wegner, David Hall, Nico Lang, Konrad Schindler and Pietro Perona for their paper *"From Google Maps to a fine-grained catalog of street trees"*.

<https://www.sciencedirect.com/science/article/pii/S0924271617303453?via%3Dihub>

The Best Paper Award for 2017 (volumes 123-134) was awarded to Davide Antonio Cucci, Martin Rehak and Jan Skaloud for their paper *"Bundle adjustment with raw inertial observations in UAV applications"*.

<https://www.sciencedirect.com/science/article/pii/S0924271617301387?via%3Dihub>

The Best Paper Award for 2016 (volumes 111-122) was awarded to Wei Huang, and Songnian Li for their paper *"Understanding human activity patterns based on space-time-semantics"*

<https://www.sciencedirect.com/science/article/pii/S0924271616303203>

The winner of the **U.V. Helava Award for the 2016-2019 period** as selected by the Jury was awarded to Davide Antonio Cucci, Martin Rehak and Jan Skaloud for their

paper ***"Bundle adjustment with raw inertial observations in UAV applications"***.

In addition, the Best Paper Award for 2020 (volumes 159-170) has been selected by the Jury, which was awarded to Andrea Meraner, Patrick Ebel, Xiao Xiang Zhu and Michael Schmitt for their paper *"Cloud removal in Sentinel-2 imagery using a deep residual neural network and SAR-optical data fusion"*.

<https://www.sciencedirect.com/science/article/pii/S0924271620301398>

The Best Paper Award for 2021 (volumes 171-182) was awarded to Hao Li, Huai Yu, Jinwang Wang, Wen Yang, Lei Yu and Sebastian Scherer for their paper *"ULSD: Unified line segment detection across pinhole, fisheye, and spherical cameras"*.

<https://www.sciencedirect.com/science/article/pii/S0924271621001623>

Outlook

- The Journal continues to grow in paper quality, quantity, and impact.
- Volume of submissions and published articles have increased markedly over the past 6 years.
- To handle the increasing workload, the editorial team has also grown.
- Handling time continues to decrease while the Impact Factor has increased thanks to the strong capabilities and dedication of the editorial team.
- Editors-in-Chief, Clément Mallet and Qihao Weng, have kept communications about recent developments in the Journals etc., and have best intentions to keep growing the quality, quantity and impacts of the Journal.

Report of the Editor-in-Chief of the ISPRS International Journal of Geo-Information, Wolfgang Kainz

Highlights

- After being accepted for coverage by **Science Citation Index Expanded** (Web of Science), the impact factor of ISPRS *IJGI* has been increasing steadily year-by-year. The latest impact factor for ISPRS *IJGI* is **2.899**, ranking 19/32 (Q3). The impact factor has had sustained growth for 5 years. The latest CiteScore is **4.6**.
- The number of publications and pdf downloads keeps growing every year.
- A new, more focused journal scope was announced in June 2021.
- Nine associate editors were appointed for *IJGI* in 2021

- Eleven volumes have been published since 2012. Volume 1 (2012) has 3 issues; Volumes 2 (2013) to 4 (2015) have 4 issues; Volumes 5 (2016) to 10 (2021) have 12 issues, and since the beginning of 2016, we transitioned to monthly issues. Volume 11 (2022) is ongoing, and has published 1 issue so far.

Online Readership

The total number of downloads of *IJGI* papers has been increasing as a whole (Table 1), especially in 2017. Compared with the data for 2016, we observed an increase of more than 65% in 2017.

Table 1. Downloads in 2016, 2017, 2018, 2019, 2020, 2021 and 2022

Year	2016	2017	2018	2019	2020	2021	2022(till January)
Downloads	191,640	317,701	112,345	150,624	258,910	364,512	14,783

* The data from visits according to Google Analytics (GA).

The country downloading the most *IJGI* articles during past four years was China, with 21.7% of the total number of downloads. Please see below information about top 20 accessing countries (Figure 1).

The most downloaded article from 2016 till now was “Automatic Geodata Processing Methods for

Real-World City Visualizations in Cities: Skylines” (<https://doi.org/10.3390/ijgi9010017>) by Jan Pinos, Vit Vozenilek and Ondrej Pavlis published in Volume 9, Issue 1 as part of the Special Issue “Gaming and Geospatial Information”, and was downloaded 18,228 times. For a top 10 list of most downloaded articles published from 2016 to 2022, please see Appendix 1.

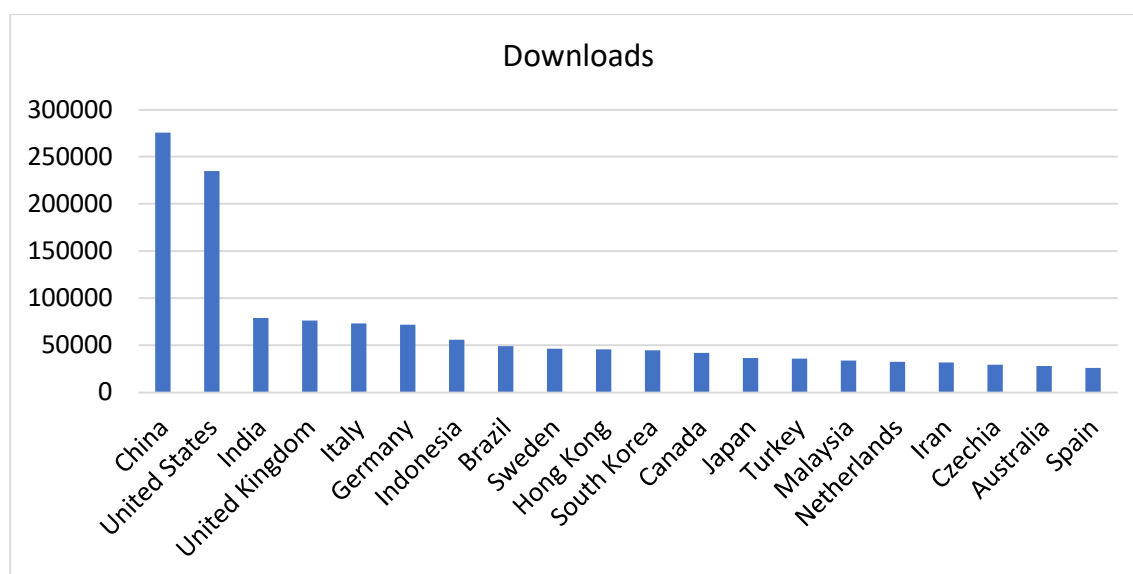


Figure 1. Geographical distribution of downloads for the top 20 countries.

Publication Statistics

New Submissions Distribution

From 2016 to date, we have received 9,839 submissions, 43.3% of which are Special Issue submissions and the remaining 56.7% are regular

submissions. Figure 2 shows the yearly submission data. The average number of monthly submission data from 2016 to 2022 is shown in Figure 3.

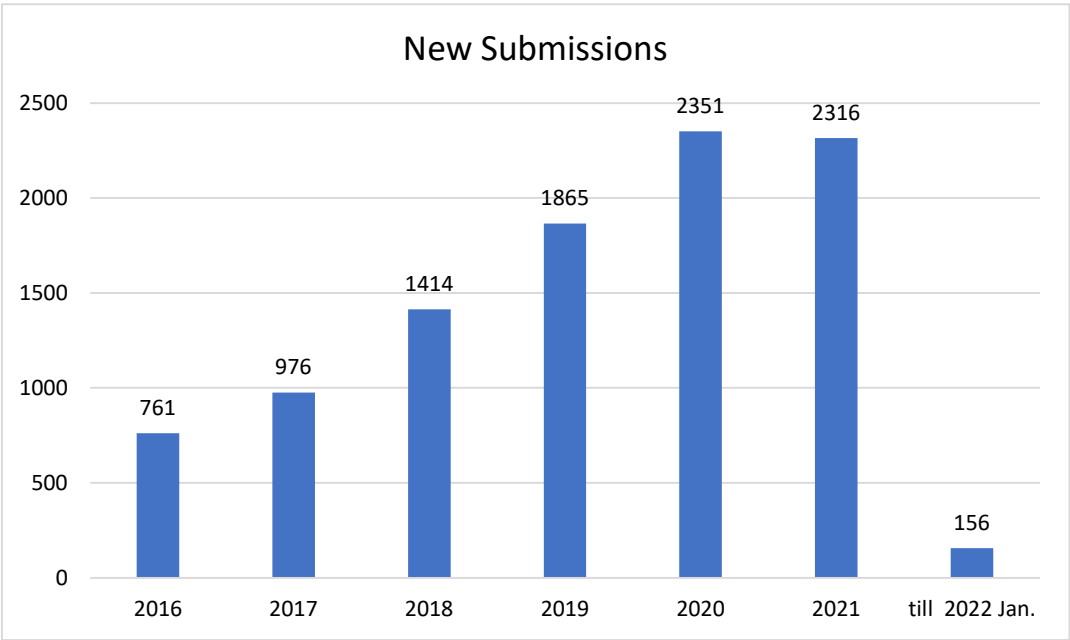


Figure 2. The number of yearly submissions from 2016 to 2022.

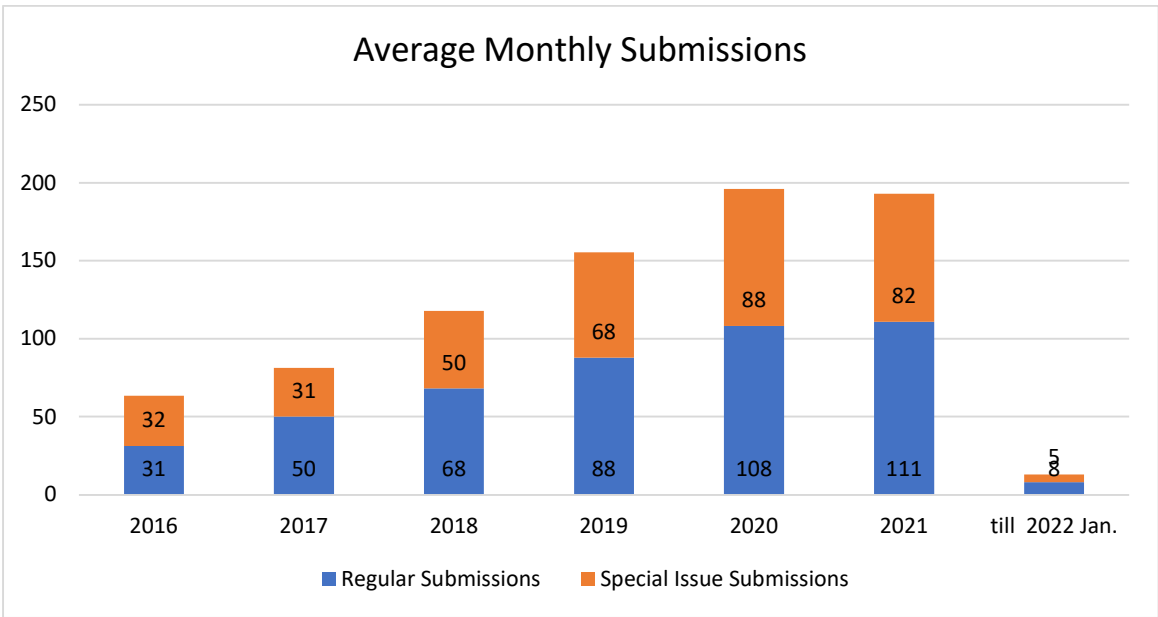


Figure 3. Average number of monthly submission data from 2016 to 2022.

The Figure 4 below shows the geographical distribution of new submissions from 2016 to 2022. We received submissions from 109 countries.

Authors from China are the largest contributors with 47.7%, followed by authors from USA (4.7%), Italy (2.8%), and Germany (2.6%).

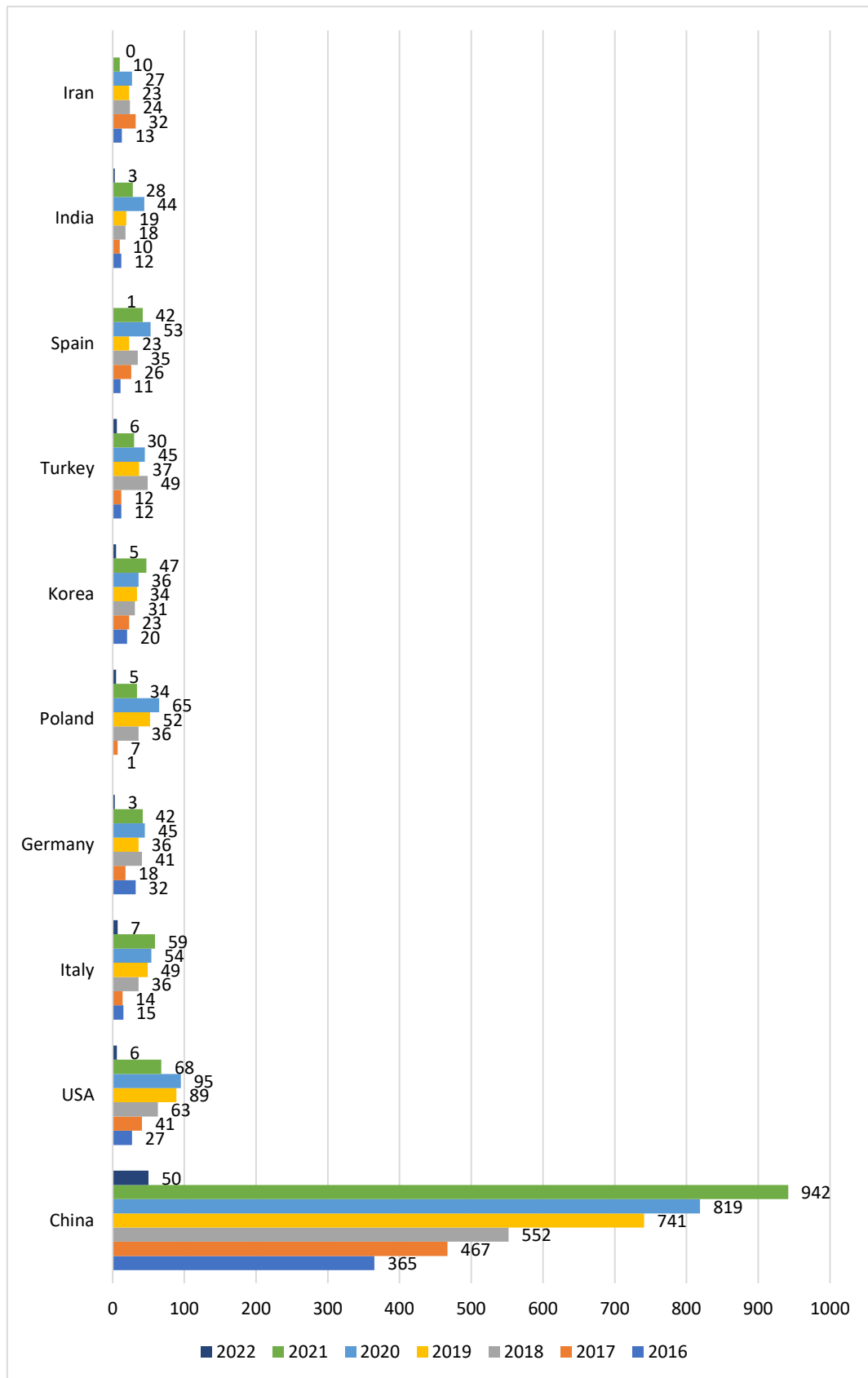


Figure 4. Geographical distribution of new submissions of top ten counties from 2016 to 2022.

Trend in Submissions and Rejection Rates

The number of submissions has been steadily increasing from 2016 up to now. Please refer to

Table 2 and Figure 5 for a representation of the trends in submissions and accepted and rejected papers from 2016 up to now.

Table 2. Publication and rejection trends from 2016–2022.

Year	New Submissions	Accepted Papers (published)	Rejected (=Rejected before and after review)	Papers and Rejection Rate (peer-reviewed)
2016	479	203	445	64.31%
2017	976	403	529	56.76%
2018	1414	486	791	61.94%
2019	1865	578	1180	67.12%
2020	2351	745	1388	65.07%
2021	2316	850	1331	61.03%
2022	186	86	126	59.43%

The main reason for manuscripts being rejected before peer review is that manuscripts do not reach the journal requirements, e.g., they are out of the journal scope, may have a high repetition rate,

language problems, insufficient references, and rather short length (some research articles are less than seven pages and/or lack figures and tables).

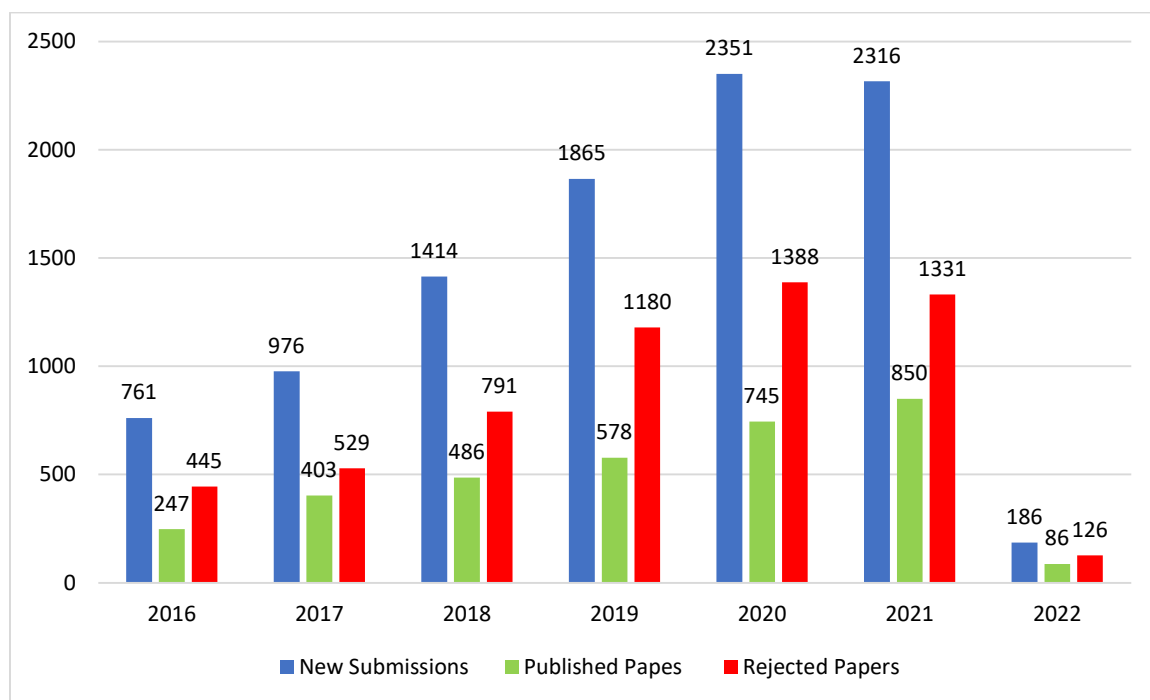


Figure 5. Publication and rejection trends from 2016 to 2022.

2.3. Contributing Countries

The geographical distribution (top 20 countries) of published papers in the past six years is shown in

Figures 6. Authors from China were the largest contributors (39.3% of all publications), followed by USA (7.07%), Germany (4.55%), Italy (4.12%), Spain (3.48%), Poland (2.86%), and Korea (2.55%).

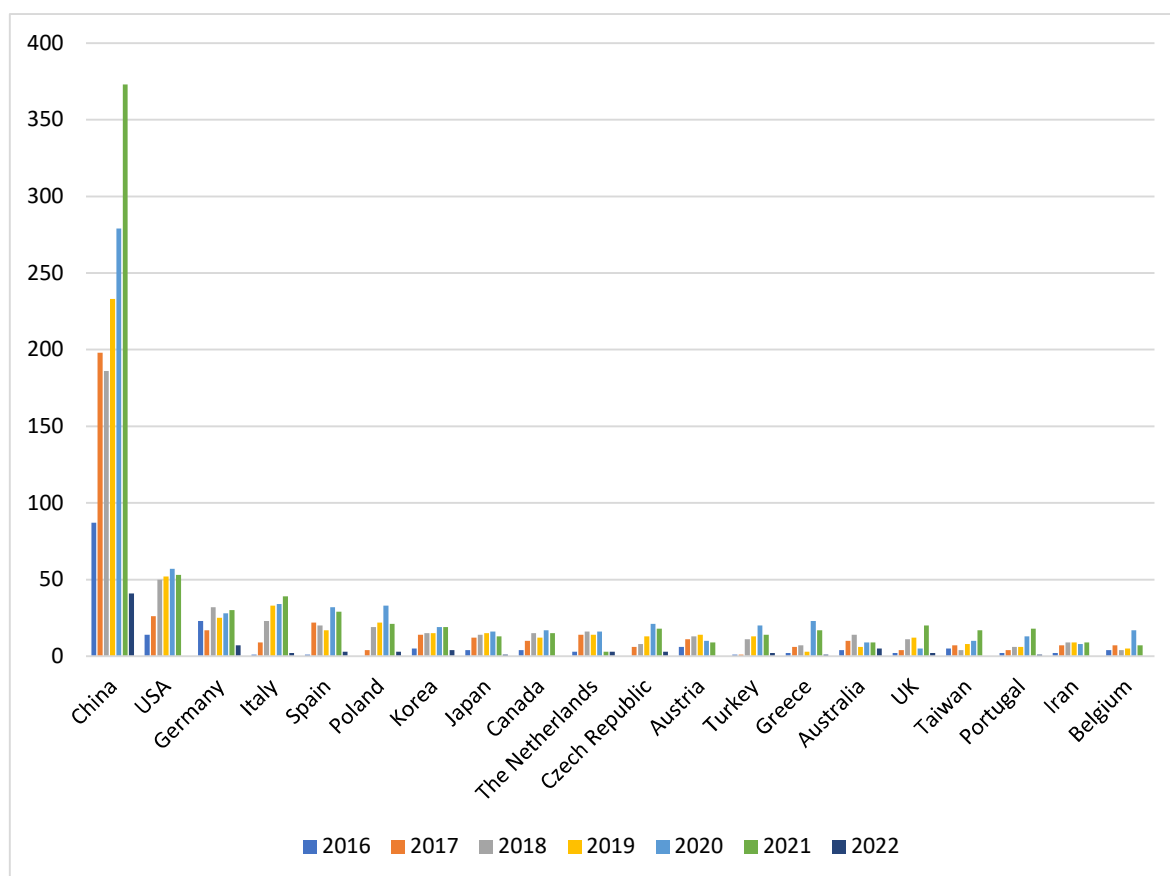


Figure 6. Publications by top 20 countries from 2016 to January 2022.

Type of Published Papers

The percentage of articles published in each year were 97.6% (2016), 97% (2017), 96.9% (2018),

94.6% (2019), 96.2% (2020), 97.2% (2021) and 96.7% (2022) (Figure 7).

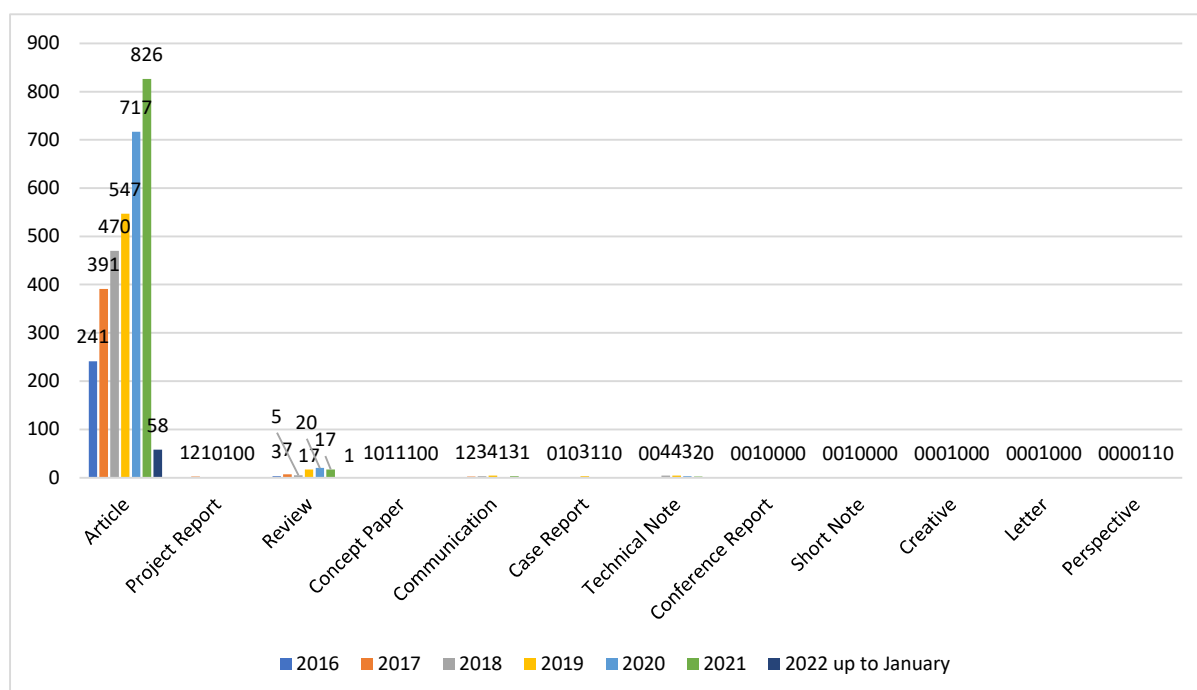


Figure 7. Paper type of publications from 2016 to 2022.

Turnaround Time

The average publication time (submission to online publication) was 97.85 days for 2016, 73.34 days for 2017, 56.79 days for 2018, 56.21 days for 2019, 46.84 days for 2020, 62.12 days for 2021 and 63.03 days for 2022. The main factors affecting the processing time are 1) paper quality (the most important factor); 2) revision time; 3) review time; 4) decision time.

Special Issues

During the last six years, we have closed 217 Special Issues with an average of more than 6 papers published per issue. In 2021, there are 13 Special Issues open for submission to date. The closed Special Issues with more than 10 papers are listed in Table 3.

Table 3. Special Issues with more than 10 papers (from 2016 to 2022).

Special Issue Name	GE name	Submission Deadline	Paper Published
Advances and Innovations in Land Use/Cover Mapping	Qiming Zhou, Zhilin Li	2016-10-31	11
Recent Advances in Geodesy and Its Applications	Zhao-Liang Li, José A. Sobrino, Chao Ren	2016-11-30	15
Intelligent Spatial Decision Support	Shih-Lung Shaw, Qingquan Li, Yang Yue	2016-12-31	10
Location-Based Services	Georg Gartner, Haosheng Huang	2017-02-28	19
Spatial Ecology	Duccio Rocchini	2017-02-28	11
Volunteered Geographic Information	Alexander Zipf, David Jonietz, Vyron Antoniou, Linda See	2017-03-15	17
Smart Solutions for Disaster Risk Reduction: Big Data Concepts for Disaster Risk Reduction (DRR)	Milan Konecny	2017-04-30	14
Web/Cloud Based Mapping and Geoinformation	Bert Veenendaal, Maria Antonia Brovelli, Serena Coetzee, Peter Mooney	2017-05-31	10
3D Indoor Modelling and Navigation	Sisi Zlatanova, Kourosh Khoshelham, George Sithole	2017-06-30	15
Geospatial Big Data and Transport	Bin Jiang, Constantinos Antoniou	2017-06-30	10
Advances in Geo-Information for Environmental Forensics and Environmental Risk Management in the Anthropocene	Jason K. Levy	2017-06-30	10
Research and Development Progress in 3D Cadastral Systems	Peter Van Oosterom, Efi Dimopoulou	2017-08-31	14
Discovery and Prediction of Moving Objects in Databases using GIS-based Tools	Sabine Timpf, Jean Damascène Mazimpaka	2018-02-28	13
Spatial Environmental Analysis, Informatics, Planning, Restoration, and Management	Jason K. Levy	2018-02-28	11
Geoinformatics in Citizen Science	Gloria Bordogna	2018-03-31	11

State-of-the-Art Virtual/Augmented Reality and 3D Modeling Techniques for Virtual Urban Geographic Experiments	Jianming Liang, Jianhua Gong, Yu Liu	2018-04-30	18
Urban Environment Mapping Using GIS	Fabio Dell'Acqua	2018-05-31	18
Geographic Information Science and Spatial Analysis in Water Resources	Heejun Chang	2018-05-31	14
Web and Mobile GIS	Martin Breunig	2018-07-31	10
Geo-Information and the Sustainable Development Goals (SDGs)	Karin Pfeffer, Yola Georgiadou	2018-08-31	16
Place-Based Research in GIScience and Geoinformatics	Thomas Blaschke, Song Gao	2018-08-31	12
Geospatial Big Data and Urban Studies	Maria Antonia Brovelli, Hussein Abdulmuttalib, Chris Pettit, Peter Mooney	2018-09-30	19
GEOBIA in a Changing World	Geoffrey J. Hay, Christiane Weber	2018-10-01	15
GIS for Safety and Security Management	Igor Ivan, Jan Caha, Jaroslav Burian	2018-12-15	14
Data Acquisition and Processing in Cultural Heritage	Fulvio Rinaudo, Gabriele Bitelli, Pierre Grussenmeyer, Diego Gonzalez-Aguilera	2019-01-31	12
Spatial Analysis for Terrestrial Ecosystems: Advances in Mapping, Analyses and Management	Jason K. Levy	2019-02-28	15
Big Data Computing for Geospatial Applications	Zhenlong Li, Wenwu Tang, Qunying Huang, Eric Shook, Qingfeng Guan	2019-06-30	11
Free and Open Source Tools for Geospatial Analysis and Mapping	Paolo Dabove, Bianca Federici	2019-10-30	11
Geospatial Approaches to Landslide Mapping and Monitoring	Veronica Tofani, William Frodella	2019-10-31	14
Historical GIS and Digital Humanities	Keiji Yano, Akihiro Tsukamoto	2019-11-30	12
Data Mining and Feature Extraction from Satellite Images and Point Cloud Data	Pedram Ghamisi	2019-11-30	16
Open Science in the Geospatial Domain	Massimiliano Cannata	2019-12-20	10

Advanced GIS and RS Applications for Soil and Land Degradation Assessment and Mapping	László Pásztor	2019-12-31	13
Urban Crime Mapping and Analysis Using GIS	Michael Leitner, Alina Ristea	2020-02-15	18
State-of-the-Art in Spatial Information Science	Songnian Li, Sisi Zlatanova, Maria Antonia Brovelli, Monika Sester	2020-03-31	10
Advance Geospatial Artificial Intelligence for Landslide Modeling, Prediction and Management	Dieu Tien Bui, Endre Før Gjermundsen	2020-05-31	11
Geo-Informatics in Resource Management	Francisco Javier Mesas Carrascosa	2020-06-30	12
Recent Trends in Location Based Services and Science	Georg Gartner, Haosheng Huang	2020-07-15	13
3D Indoor Mapping and Modelling	Lucía Díaz-Vilariño, Abdoulaye Abou Diakité, Shayan Nikoohemat	2020-10-31	10
Multimedia Cartography	Beata Medynska-Gulij, David Forrest, Paweł Cybulski	2020-12-30	15
Measuring, Mapping, Modeling, and Visualization of Cities	José António Tenedório	2020-12-31	20
Geospatial Methods in Social and Behavioral Sciences	Mei-Po Kwan	2020-12-31	17
Geographic Complexity: Concepts, Theories, and Practices	Changxiu Cheng, Peichao Gao, Samuel A. Cushman	2020-12-31	13
Geospatial Artificial Intelligence (geoAI)	Jacinto Estima, Bruno Martins	2020-12-31	11
OpenStreetMap as A Multi-Disciplinary Nexus: Perspectives, Practices and Procedures	A. Yair Grinberger, Marco Minghini, Peter Mooney, Levente Juhász, Godwin Yeboah	2021-01-31	14
Geodata Science and Spatial Analysis in Urban Studies	Maria Antonia Brovelli, Xiaoguang Zhou, Hussein Abdulmuttalib	2021-04-30	26
Spatio-Temporal Models and Geo-Technologies	Géraldine Del Mondo, Peng Peng, Feng Lu, Jérôme Gensel	2021-06-30	17

Selected Papers from the International Conference on Geo-Information Technology and its Applications (ICGITA2019)	Weicheng Wu, Yalan Liu, Mingxing Hu	2021-06-30	14
GIS in Sustainable Transportation	Alexandre B. Gonçalves, Filipe Moura	2021-06-30	12
GIS in Healthcare	Fazlay S. Faruque	2021-07-31	11
Application of Geology and GIS	Peter Bliščan	2021-08-31	10
Geovisualization and Social Media	Yeran Sun, Shaohua Wang	2021-08-31	23
Geographical Analysis, Urban Modelling, Spatial Statistics, Econometric and Multidimensional Evaluation in Urban Environment	Giuseppe Borruso, Beniamino Murgante, Carmelo Maria Torre, Hartmut Asche, Ginevra Balletto	2021-09-30	14
Geomatics and Geo-Information in Earthquake Studies	Christian Bignami, Hiroyuki Miura, Maurizio Pollino, Sonia Giovinazzi	2021-09-30	14
Disaster Management and Geospatial Information	Dean Kyne	2021-09-30	11
Geo-Information Science in Planning and Development of Smart Cities	Giuseppe Borruso, Ginevra Balletto, Michele Campagna, Andrea Favretto, Giovanni Mauro	2021-09-30	22
GIS-Based Analysis for Quality of Life and Environmental Monitoring	Christos Chalkias, Vassilis Pappas, Andreas Tsatsaris	2021-09-30	12
Cultural Heritage Mapping and Observation	Andreas Georgopoulos	2021-10-01	11
Unmanned Aerial Systems and Geoinformatics	Panagiotis Partsinevelos, Filiberto Chiabrando, Fabio Giulio Tonolo, Kevin W. Franke	2021-10-31	11
Geospatial Metadata	Mohsen Kalantari, Abbas Rajabifard, Jacynthe Pouliot	2021-11-30	12
Deep Learning and Computer Vision for GeoInformation Sciences	James Haworth, Suzana Dragicevic, Marguerite Madden, Mingshu Wang, Haosheng Huang	2021-12-15	23
Geomorphometry and Terrain Analysis	Josef Strobl, Liyang Xiong	2021-12-31	14

There are currently 17 Special issues open for submissions:

Table 4. Online Special Issues

Special Issue Name	GE name	Submission Deadline
Cartography and Geomedia	Beata Medynska-Gulij, David Forrest, Thomas P. Kersten	2022-05-20
Geo-Information for Watershed Processes	Walter Chen, Fuan Tsai	2022-03-31
Heritage Building Information Modeling: Theory and Applications	Carlo Bianchini, Martina Attenni, Marika Griffo	2022-04-30
Upscaling AI Solutions for Large Scale Mapping Applications	Fabio Remondino, Joep Crompvoets, Norbert Haala	2022-06-30
GIS-supported DEM Analysis for Characterization of Short to Long Term Landscape Dynamics	Michele Santangelo, Dario Gioia	2022-04-30
Eye-Tracking in Cartography	Stanislav Popelka, Zdeněk Stachoň, Peter Kiefer, Arzu Çöltekin	2022-06-30
Integrating GIS and Remote Sensing in Soil Mapping and Modeling	Dimitris Triantakostas, Panagiotis Tziachris	2022-04-30
Spatial Components of COVID-19 Pandemic	Fazlay S. Faruque, Peng Jia, Mo Ashifur Rahim	Collection
Climate Adaptation: The Role of Geospatial Data in Sustainable Infrastructures	Joep Crompvoets, Cesar Casiano Flores	2022-07-31
Advances in GIS Hydrological Modeling	Paolo Paron	2022-02-28
Spatial and Temporal Modelling of Renewable Energy Systems	Luis Ramirez Camargo, Johannes Schmidt, Wolfgang Dörner	2021-01-31
Application of GIS for Biodiversity Research	Neftali Sillero, Salvador Arenas-Castro	2022-05-31
GIS Software and Engineering for Big Data	Peng Yue, Danielle Ziebelin, Yaxing Wei	2022-12-31
Advances in Augmented Reality and Virtual Reality for Smart Cities	Sylvie Daniel, Gunho Sohn, Lingli Zhu	2022-02-15
Applications of GIScience for Land Administration	Mohsen Kalantari, Gerhard Navratil	2022-02-28
Geovisualization and Map Design	Vit Vozenilek, Georg Gartner, Ian Muehlenhaus	2022-04-30
Navigation for Autonomous Driving	Dong-Hwan Hwang	2022-03-01

Editorial Board

Associate Editors

For the first time, we are proud to have 9 new Associate Editors join the *IJGI* editorial board in 2021 (Table 5) consecutively. Each of the associate editors takes charge of one research area separately. Furthermore, the associate editors will

provide support for journal management, including paper quality control, paper solicitation, journal promotion, management of the entire team of academic editors, etc. In addition, two more associate editors are expected to be in position in early 2022. They will take responsibility for the topics 'Location-based services and trajectory analysis' and 'Spatial data management'.

Table 5. Associate editors and responsible areas.

	<p>Dr. Dev Raj Paudyal School of Civil Engineering and Surveying, University of Southern Queensland West Street, Toowoomba, QLD 4350, Australia Interests: spatial data infrastructure (SDI); land administration; cadastre; IoT; citizen science; mixed method research; land use policy; catchment management; health informatics Responsible Area of the Scope: Spatial data infrastructures</p>
	<p>Prof. Dr. Florian Hruby Berlin University of Applied Sciences and Technology, Luxemburger Straße 10, 13353 Berlin, Germany Interests: geovisualization; empirical cartography; theoretical cartography; virtual reality; GIS Responsible Area of the Scope: Cartography</p>
	<p>Prof. Dr. Jamal Jokar Arsanjani Geoinformatics and Earth Observation Research Group, Department of Planning, Aalborg University Copenhagen, A.C. Meyers Vænge 15, DK-2450 Copenhagen, Denmark Interests: citizen observations; Earth observation; geocomputation; GEO-artificial intelligence; data quality; environmental monitoring and assessment Responsible Area of the Scope: Spatial analysis and decision making</p>
	<p>Prof. Dr. Maria Antonia Brovelli Department of Civil and Environmental Engineering, Politecnico di Milano, Piazza Leonardo da Vinci 32, 20133 Milano, Italy Interests: geospatial web; geodata science; citizen science; open science; open data; open geospatial software; geospatial artificial intelligence Responsible Area of the Scope: Geospatial Artificial Intelligence</p>
	<p>Dr. Wei Huang College of Surveying and Geo-informatics, Tongji University, 1239 Siping Road, Shanghai 200092, China Interests: VGI; urban computing; transportation geography; computational social science Responsible Area of the Scope: Citizen Science, Crowd Sourcing and Volunteered Geographic Information</p>
	<p>Dr. Mingshu Wang School of Geographical & Earth Sciences, College of Science & Engineering, University of Glasgow, Glasgow G12 8QQ, UK Interests: GIScience; geodata science; urban informatics; city and regional development Responsible Area of the Scope: Urban Informatics, Smart Cities and Communities</p>

**Prof. Dr. Huayi Wu**

LIESMARS, Wuhan University, 129 Luoyu Road, Wuhan 430079, China

Interests: spatial analysis; spatial statistics; web-based GIS; geospatial information sharing; geoprocessing; high-performance computation**Responsible Area of the Scope:** Geospatial Web**Dr. Godwin Yeboah**

Institute for Global Sustainable Development, University of Warwick, Coventry CV4 7AL, UK

Interests: GIScience; citizen science; spatial analysis; geomatics; open-source; geocomputation; human–environment interactions; urban informatics; sustainable development**Responsible Area of the Scope:** Advanced Geospatial Applications
Special Issues, Collections and Topics in MDPI journals**Prof. Dr. Sisi Zlatanova**

School of Built Environment, Faculty of Arts, Design and Architecture, University of New South Wales, Sydney, NSW 2052, Australia

Interests: geospatial information systems; data structures; database management; building information modelling; digital twin; photogrammetry and remote sensing; surveying; conceptual modelling; mobile technologies**Responsible Area of the Scope:** Spatial Data Modeling**Editorial Board Member**

We now have 109 Editorial Board Members from 26 countries of all over the world. Table 6 below lists

the names and geographical distribution of these members.

Table 6. List of Editorial Board Members (Data: up to February 2022).

Country	EBM
USA	Dr. Amr Abd-Elrahman
	Prof. Dr. Barbara P. Battenfield
	Prof. Dr. Andrew Crooks
	Prof. Dr. Leila De Floriani
	Prof. Dr. Fazlay S. Faruque
	Prof. Dr. Suchi Gopal
	Prof. Dr. Hartwig H. Hochmair
	Prof. Dr. Michael Leitner
	Prof. Dr. Jason Levy
	Dr. Stefan Leyk
	Dr. Zhenlong Li
	Dr. Marguerite Madden
	Dr. Silvia Nittel
	Prof. Dr. Michael P. Peterson
	Prof. Dr. Robert Pontius Jr
	Prof. Dr. Sergio Rey

	Prof. Dr. Markus Schneider
	Prof. Dr. Shih-Lung Shaw
	Dr. Giulia Sofia
	Prof. Dr. Kathleen Stewart
	Prof. Dr. Jean-Claude Thill
	Prof. Dr. John P. Wilson
UK	Prof. Dr. Tao Cheng
	Prof. Dr. Paul A. Longley
	Dr. Nicholas Tate
Turkey	Dr. Ozgun Akcay
The Netherlands	Prof. Dr. Yola Georgiadou
	Dr. Marco Helbich
	Dr. Derek Karssenbergh
	Prof. Dr. Karin Pfeffer
	Prof. Dr. Andrew Skidmore
	Dr. Ron van Lammeren
Switzerland	Dr. Bastiaan Van Loenen
	Prof. Dr. Massimiliano Cannata
Sweden	Dr. Haosheng Huang
	Prof. Dr. Lars Harrie
	Prof. Dr. Bin Jiang
Spain	Dr. Ali Mansourian
	Prof. Dr. Rafael Suárez-Vega
Russia	Prof. Dr. Vladimir Tikunov
Portugal	Dr. Sérgio Freire
	Prof. Dr. Bruno Martins
	Prof. Dr. Marco Painho
	Dr. Maribel Yasmina Santos
	Prof. Dr. José António Tenedório
Poland	Dr. Marcin Kulawiak
	Prof. Dr. Beata Medynska-Gulij
New Zealand	Prof. Dr. Mark Gahegan
	Dr. Antoni Moore
Korea	Prof. Dr. Ki-Joune Li
Italy	Prof. Dr. Raffaele Albano
	Dr. Christoph Aubrecht
	Dr. Luigi Barazzetti
	Prof. Dr. Alberto Belussi

	Dr. Gloria Bordogna
	Prof. Dr. Giuseppe Borruso
	Dr. Filiberto Chiabrando
	Prof. Dr. Eliseo Clementini
	Dr. Gino Dardanelli
	Dr. Cristiano Fugazza
	Dr. Gerardo Grelle
	Prof. Dr. Fulvio Rinaudo
	Dr. Veronica Tofani
Israel	Dr. Sagi Dalyot
	Prof. Dr. Ammatzia Peled
	Dr. Motti Zohar
Ireland	Dr. Michela Bertolotto
Iran	Prof. Dr. Mahmoud Reza Delavar
	Dr. Himan Shahabi
Hungary	Prof. Dr. Arpad Barsi
	Prof. Dr. Michael Szell
Greece	Prof. Dr. Christos Chalkias
	Prof. Dr. Marinos Kavouras
	Prof. Dr. Yannis Maniatis
	Dr. Panagiotis Partsinevelos
	Dr. George P. Petropoulos
Germany	Prof. Dr. Manfred Ehlers
	Prof. Dr. Dieter Fritsch
	Prof. Dr. Francis Harvey
	Prof. Dr. Jochen Schiewe
	Prof. Dr. Monika Sester
France	Prof. Dr. Christophe Claramunt
	Prof. Dr. Sébastien Lefèvre
Czech Republic	Prof. Dr. Milan Konecny
	Prof. Dr. Vit Vozenilek
China	Prof. Dr. Jun Chen
	Prof. Dr. Tao Cheng
	Prof. Dr. Mei-Po Kwan
	Prof. Dr. Wenzhong Shi
	Prof. Dr. Qiming Zhou
	Prof. Dr. Xinming Tang
Canada	Prof. Dr. Suzana Dragicevic

	Prof. Dr. Chris Gold
	Dr. Geoffrey Hay
	Prof. Dr. Faramarz Samavati
	Dr. Gunho Sohn
	Prof. Dr. Fraser Taylor
Belgium	Prof. Dr. Philippe De Maeyer
	Prof. Dr. Nico van de Weghe
	Prof. Dr. Bart Kuijpers
Austria	Prof. Dr. Norbert Bartelme
	Prof. Dr. Thomas Blaschke
	Prof. Dr. Georg Gartner
	Dr. Bernd Resch
	Prof. Josef Strobl
Australia	Prof. Dr. Matt Duckham
	Prof. Dr. Chris Pettit
	Prof. Dr. Biswajeet Pradhan
	Prof. Dr. Stephan Winter

New Board Section

Starting from September 2019, we created two new editorial positions named “Topic Board” and “Reviewer Board” to provide more editorial opportunities for qualified junior scholars and strengthen the cooperative relationship with our authors and reviewers.

Starting from October 2021, we create a new editorial position named “*Topical Advisory Panel*”. As MDPI recently launched Topics, which are collections of papers that concentrate on specific interdisciplinary topics, the original Topic Board in *IJGI* was adjusted to the new Topical Advisory Panel. The Topical Advisory Panel is mainly comprised of early career researchers, eager to gain experience in editorial work.

In conclusion, the journal now has 191 Reviewer Board members and 83 Topical Advisory Panel members.

Contribution of the Editorial Board Members

Paper Contribution

From 2016 to January 2022, a total of 401 manuscripts have been submitted to *ISPRS IJGI* by 72 Editorial Board Members. By January 2022, 274 of these submissions were published.

Special Issue Contribution

71 Editorial Board Members have organized 114 Special Issues and helped solicit papers for our Special Issues in the past six years.

Reviews

71 Editorial Board members helped review 305 manuscripts for *ISPRS IJGI* in the last six years.

Decisions

100 Editorial Board members have helped make decisions (including pre-check decisions, first decisions, and final decisions) for papers submitted to *ISPRS IJGI* between 2016 and 2022.

Please refer to Table A3 to see the detailed information about the activities of the Editorial Board Members between 2016 and 2022.

Indexing

ISPRS IJGI was firstly covered by the Science Citation Index Expanded (Web of Science) in April 2015. It then received its first impact factor of 0.651 in 2016. After that, the impact factor of *ISPRS IJGI* has steadily increased year-by-year. The latest impact factor of the journal is 2.899, which has had sustained growth for 5 years. Data related to the impact factor in the latest Journal Citation Reports are presented below (Table 5).

Table 5. IF data from the Journal Citation Reports.

Year	Total Cites	Impact Factor	Geography, Physical		Remote Sensing		Computer Information Systems		Science,
			Rank	Quartile	Rank	Quartile	Rank	Quartile	
2016	552	1.502	35/49	Q3	22/29	Q4	n/a	n/a	
2017	1183	1.723	33/49	Q3	18/30	Q3	n/a	n/a	
2018	2196	1.840	31/50	Q3	19/30	Q3	n/a	n/a	
2019	3730	2.239	31/50	Q3	18/30	Q3	n/a	n/a	
2020	6433	2.899	23/50	Q2	19/32	Q2	76/161	Q2	

Data related to citations from the latest Journal Citation Reports between 2016 and 2022 are presented below (Figure 8). In comparison to other

competitors (Figure 9), we still have much space for significant progress.

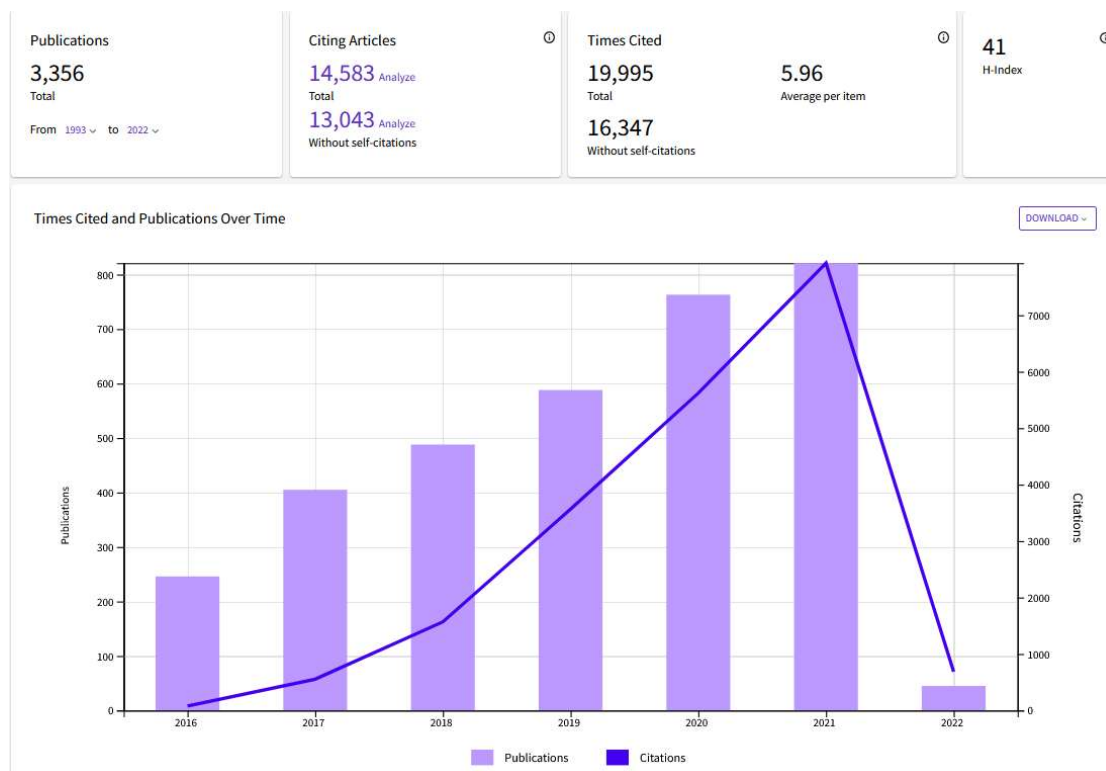


Figure 8. Citation data from the latest Journal Citation Reports for 2016–2022.

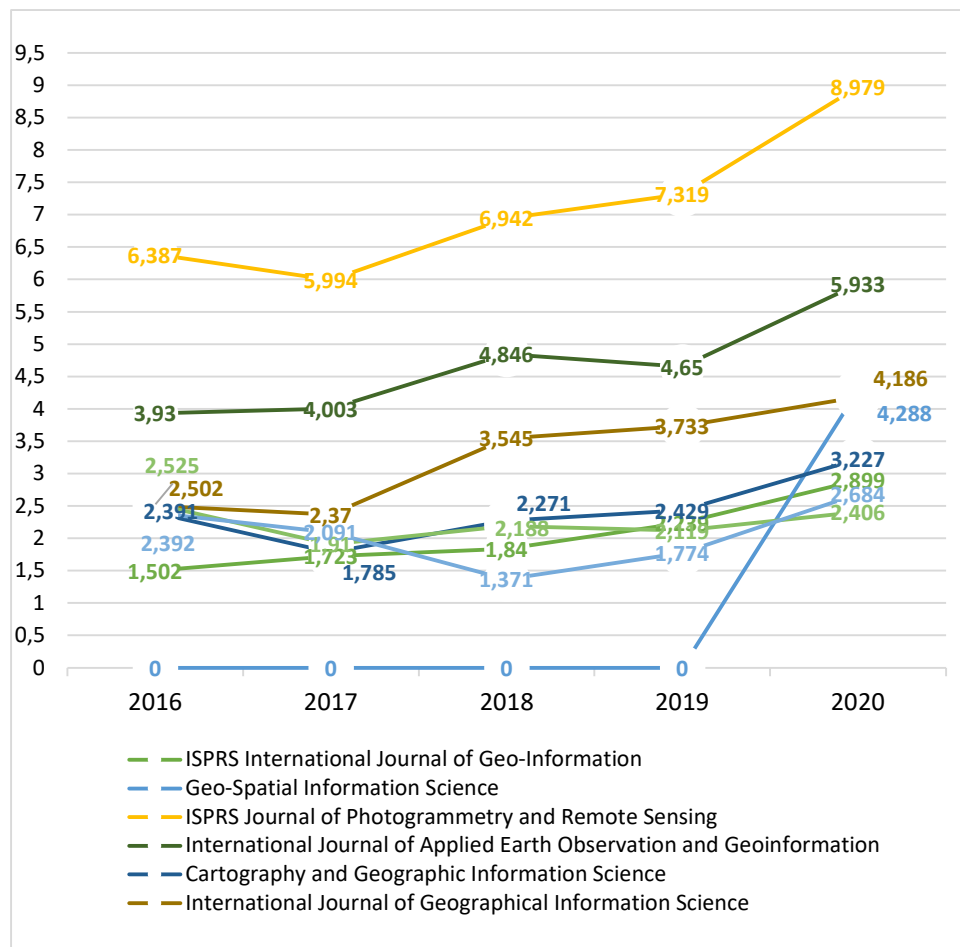


Figure 9. Comparative trends in impact factors for various GIS journals.

Marketing and Promotions

Journal Awards

The Jack Dangermond Award

The Jack Dangermond Award, which consists of an ISPRS certificate and a grant of USD 10,000, will be presented every four years to the author(s) of an outstanding paper on one of the topics included in the scope of the journal. The winner of the 1st Jack Dangermond Award had been selected from papers published in the ISPRS *International Journal of Geo-Information* between 1 January 2017 and 31 December 2019:

Voxel-Based 3D Point Cloud Semantic Segmentation: Unsupervised Geometric and Relationship Featuring vs. Deep Learning Methods (<https://doi.org/10.3390/ijgi8050213>) by Florent Poux and Roland Billen

The winner of the 2nd Jack Dangermond Award will be selected from papers published in the ISPRS *International Journal of Geo-Information* between 1 January 2020 and 31 December 2021. During this period, the committee will select one best paper each year as the award candidate, and the final

winner will be selected from these candidates. Thus far, one candidate for this award has been determined:

2020 IJGI Best Paper

Cartographic Vandalism in the Era of Location-Based Games—The Case of OpenStreetMap and Pokémon GO

by Levente Juhász, Tessio Novack, Hartwig H. Hochmair and Sen Qiao

<https://doi.org/10.3390/ijgi9040197>

IJGI Travel Award

To support postdoctoral researchers and PhD students in the GIS field, we established the *IJGI* Travel Award, which has been awarded annually since 2016. Each winner of this award is granted with a certificate and 800 CHF to attend an academic conference of their choice in the coming year. So far, we have hosted this award four times and granted 5600 CHF to seven researchers and PhD students to attend academic conferences. Below is the detailed information of each award winner in the last four years, according to their status at the time of receiving the reward.

IJGI Travel Award 2021

Junghwan Kim is a Ph.D. student of the Department of Geography and GIScience, University of Illinois at Urbana-Champaign, Champaign, IL 61820, USA;

Xuke Hu is a postdoctoral fellow in the Department of Citizen Science, Institute of Data Science, German Aerospace Center (DLR), Jena, 07745, Germany.

IJGI Travel Award 2020

Jesús Balado Frías is a postdoctoral researcher at University of Vigo, Applied Geotechnologies Research Group. His research interests include point cloud processing, laser scanning, urban modeling, machine learning, and deep learning.

Yang Zhang is a PhD student at the SpaceTimeLab for Big Data Analytics, Department of Civil, Environmental and Geomatic Engineering, University College London (UCL), UK. Her PhD thesis is "Deep Learning Models for Network-Based Spatio-Temporal Prediction and Optimisation". Her research focuses on geoinformatics, spatial-temporal data mining, applied machine learning and deep learning, urban computing, and complex network and graph theory.

IJGI Travel Award 2019

Taylor Anderson is a PhD student at Simon Fraser University (SFU), Canada. She is a research assistant working on various research-related tasks, including conducting literature reviews; handling GIS data; and developing, programming, and implementing complex systems models.

Jue Wang is a PhD student in the Department of Geography and Geographic Information Science at the University of Illinois at Urbana-Champaign, USA. His research focuses on creating a robust and reliable resource for accessing, sharing, and analyzing confidential geospatial research data, overcoming obstacles for replicating NSF research. His work is about evaluating and implementing masking and encryption capabilities for the GVDE, and he is responsible for experiment design, data collection, data processing and analysis, and the writing of papers for publication.

IJGI Travel Award 2018

Yanbiao Sun joined UCL from Tianjin University in 2017 as a postdoctoral researcher in the Light Controlled Factory Project. He works in the field of digital mapping photogrammetry and industrial photogrammetry, with notable research in nonlinear optimization methods used for photogrammetric applications. His current work includes two aspects: photogrammetric optimization and coded target design. He is always been looking for efficient and robust algorithms to

address problems faced in images-based navigation and position. Dr. Yanbiao Sun, working with Prof. Stuart Robson, designed new planar coded targets in which each coded target includes five fixed circle dots and another three coded circle dots. The coded targets have now been successfully used in robotic tracking and positioning in the UCL project. In the future, Dr. Yanbiao Sun will focus on accurate and real-time tracking of industrial photogrammetry.

Marco Minghini's research spans the domains of Geographic Information Systems (GIS), Geoinformatics, and Remote Sensing. He is an early career scientist working on Volunteered Geographic Information (VGI), Land Use/Land Cover (LULC) mapping and education. He is also a Charter Member of the Open Source Geospatial Foundation (OSGeo, <https://www.osgeo.org>) and GeoForAll (<https://www.osgeo.org/initiatives/geo-for-all>). He has addressed several aspects of this field: the development of platforms for VGI collection (mainly from mobile devices) and management; the role of VGI to increase public participation; the analysis of VGI data to understand contribution patterns and contributors' motivations; the assessment of VGI quality, in particular positional accuracy and completeness; the relevance of protocols to guide data collection in VGI projects; VGI applications to disaster response; the role of VGI in education; and the exploitation of VGI in deriving scientific datasets such as LULC maps.

IJGI Travel Award 2017

Hongchao Fan is from the GIScience Research Group, Institute of Geography, University of Heidelberg, Germany. Dr. Fan's research focuses on volunteered geographic information and data quality. With the help of this grant, he presented findings of a recently granted research project at the International Cartographic Conference in Washington, DC, in July 2017.

IJGI Outstanding Reviewer Award

Since 2018 we set up the IJGI Outstanding Reviewer Award, to acknowledge the time and energy given by reviewers in checking manuscripts submitted to IJGI. This award is presented annually to five winners (three "Top" winners and two "Further" winners). Each "Top" winner of this award is granted with 500 CHF, a chance to publish a paper free of charge in IJGI in the coming year, and a certificate. Each "Further" winner of this award is granted with a chance to publish a paper free of charge in IJGI in the coming year and a certificate. We have so far hosted this award twice. Table 6 outlines the list of award winners for 2018, 2019 and 2020.

Table 6. Award winners of IJGI Outstanding Reviewer Awards 2018 - 2021.

Award		Type	Winners	
IJGI Reviewer Award 2018	Outstanding Award	"Top" Winner	Vít	Pászto Department of Geoinformatics, Faculty of Science, Palacký University Olomouc, 77146 Olomouc, Czech Republic
		"Top" Winner	Andrew	Newton Department of Criminology, The University of Leicester, Leicester LE1 7QA, UK
		"Top" Winner	Robert	Jeansoulin emeritus CNRS, LIGM, Université Paris-Est Marne (UPEM), Champs sur Marne, 77454 Marne-la-Vallée Cedex 2, France
		"Further" Winner	Miguel-Angel	Manso-Callejo MERCATOR Research Group, Universidad Politécnica de Madrid, ETSI en Topografía, Geodesia y Cartografía Mercator St #2 Madrid 28031, Spain
		"Further" Winner	Dapeng	Li Department of Geography, South Dakota State University, Brookings, SD 57007, USA
IJGI Reviewer Award 2019	Outstanding Award	"Top" Winner	Levente	Juhasz GIS Center, Florida International University, Miami, FL 33199, USA.
		"Top" Winner	Waldemar	Kociuba Department of Geology Soil Science and Geoinformation, Maria Curie- Sklódowska University, 21-030 Lublin, Poland
		"Top" Winner	Timofey	E. Samsonov Faculty of Geography, Lomonosov Moscow State University, Moscow 119991, Russia
		"Further" Winner	Sara	Migliorini Dipartimento di Informatica, Università degli Studi di Verona, 37134 Verona, Italy
		"Further" Winner	Amílcar	Soares Department of Computer Science, Dalhousie University, Halifax, NS B3H 1W5, Canada
		"Top" Winner	Christophe	Claramunt Naval Academy Research Institute, F-29240 Lanvéoc, France
IJGI Reviewer Award 2020	Outstanding Award	"Top" Winner	Lars	Bodum Department of Planning, Aalborg University, Rendsburggade 14, DK- 9000, Aalborg, Denmark
		"Top" Winner	Kalliopi	Kyriakou Department of Public Health Sciences, Institute for Risk Assessment Sciences, Division of Environmental Epidemiology, Utrecht University, 3584 CM Utrecht, The Netherlands

IJGI Reviewer 2021	Outstanding Award	“Further” Winner	Izabela Gołębiowska Department of Geoinformatics, Cartography and Remote Sensing, Faculty of Geography and Regional Studies, University of Warsaw, Krakowskie Przedmiescie 30, 00-927 Warsaw, Poland
		“Further” Winner	Johannes Scholz Research Group Geoinformation, Institute of Geodesy, Graz University of Technology, 8010 Graz, Austria
		“Top” Winner	Lemenkova Polina Université Libre de Bruxelles, École polytechnique de Bruxelles (EPB, Brussels Faculty of Engineering), Laboratory of Image Synthesis and Analysis, Building L, Campus de Solbosch CP131/3, Avenue Franklin D. Roosevelt 50, B-1050, Brussels, Belgium
		“Top” Winner	Andrew Newton Department of Criminology and Criminal Justice (CCJ), School of Social Sciences, Nottingham Trent University, Room 3011, Chaucer Building, 50 Shakespeare Street, Nottingham, NG1 4FQ, UK
		“Top” Winner	Dennis Edler Geography Department, Cartography, Ruhr University Bochum, 44801 Bochum, Germany
		“Further” Winner	Lukáš Herman Department of Geography, Faculty of Science, Masaryk University, Kotlarska 2, 61137 Brno, Czech Republic
		“Further” Winner	Marcela Bindzarova Gergelova Institute of Geodesy, Cartography and Geographical Information Systems, Faculty of Mining, Ecology, Process Control and Geotechnology, Technical University of Kosice, 04200 Kosice, Slovakia

Journal Promotion in Conferences

From 2016 until now, ISPRS *IJGI* has set up collaborative relationships with events all around the world in more than 40 instances. We collaborated with these events in numerous ways, including through media partnerships, conference Special Issues, sponsored booths, sponsored coffee breaks, etc. The following table (Table 7) lists the

detailed information of the events with which we collaborated in 2016–2022.

Due to the emergence of COVID-19, which has been expanding globally since February 2020, our plans for sponsoring booths at the AAG Annual Meeting 2020 and the XXIVth ISPRS Congress 2020 have been canceled.

Table 7. Journal promotion at conferences in 2016–2020 (up to March 2020).

Conferences	Date	Place	Sponsorship Type
ISPRS Congress 2016	12–19 July 2016	Prague, Czech Republic	Booth
GLP 3rd OSM 2016	24–27 October 2016	Beijing, China	Media Partner
AAG 2017	5–9 April 2017	Boston, USA	Booth

2017 SCGIS Annual Conference	16–19 July 2017	Monterey CA, USA	Coffee Break
FOSS4G 2017	14–15 August 2017	Cambridge, MA, USA	Bronze Sponsor
Geospatial Week 2017	18–22 September 2017	Wuhan, China	Booth
3D Australia Conference 2017	26–27 October 2017	Melbourne, Australia	Media Partner
ILUS 2017	1–3 November 2017	Dresden, Germany	Media Partner
FIG Commission 3 annual workshop and meeting	27–30 November 2017	Lisbon, Portugal	Special Issue
LBS 2018	15–17 January 2018	ETH Zurich	Media Partner
Foss4G-IT 2018	19–22 February 2018	Università di Roma La Sapienza	Poster
Sixth International Conference on Remote Sensing and Geoinformation of Environment	26–29 March 2018	Cyprus	Media Partner
EGU 2018	8–13 April 2018	Vienna, Austria	Booth #36
AAG 2018	10–14 April 2018	New Orleans, USA	Booth #202
GEOBIA'18	18–22 June 2018	Montpellier, France	Special Issue
IGARSS 2018	22–27 July 2018	Valencia, Spain	Booth #33
10th International Conference on Geographic Information Science	28–31 August 2018	Melbourne, Australia	Special Issue
ISPRS TCIV Symposium in Delft	1–5 October 2018	Delft, the Netherlands	Special Issue; Sponsor
2018 AGU Fall Meeting	26–27 October 2018	Washington, USA	Booth #737
The Applied Geography Conferences	31 October–2 November 2018	Kent State University, USA	Coffee Break
GIS Ostrava 2019	20–22 March 2019	Ostrava, Czech Republic	Media Partner
AAG 2019	3–7 April 2019	Washington, DC, USA	Booth #412
GISTAM 2019	3–9 May 2019	Crete, Greece	Special Issues
IF&IGIS'19	10–12 May 2019	St. Petersburg, Russia	Media Partner
Geospatial Week 2019	10–14 June 2019	University of Twente	Booth #1
ISPM conference 2019	17–19 June 2019	Aalto University	Media Partner
IGARSS 2019	28 July–2 August 2019	Yokohama, Japan	Booth #30

CIPA 2019	1–5 September 2019	Ávila, Spain	Material Sponsor
Gi4DM (Geo-Information for Disaster management)	3–6 September 2019	Prague, Czech Republic	Special Issue
LBS 2019	11–13 November 2019	Vienna, Austria	Media Partner
AGU Fall Meeting 2019	9–13 December 2019	San Francisco, USA	Special Issue
AAG Annual Meeting 2020	6–10 April 2020	Denver, Colorado, USA	Special Issues & Booth #415 (canceled due to COVID-19)
Geospatial World Forum 2020	7–9 April 2020	Amsterdam, The Netherlands	Publishing Partner
EGU 2020	3–8 May 2020	Vienna, Austria	Special Issues
GISTAM 2020	7–9 May 2020	Prague, Czech Republic	Media Partner
FIG Working Week 2020	10–14 May 2020	Amsterdam, The Netherlands	Media Partner
XXIVth ISPRS Congress 2020	14–20 June 2020	Nice, France	Booth (canceled due to COVID-19)
8th International Conference on Cartography & GIS	15–20 June 2020	Nessebar, Bulgaria	Media Partner
3D GeoInfo 2020	9–11 September 2020	London, UK	Media Partner
GIScience 2020	15–18 September 2020	Adam Mickiewicz University in Poznań, Poland	Media Partner
EuroCarto 2020	21–25 September 2020	University of Vienna, Austria	Paid Sponsorship
LBS 2020	11–13 November 2020	London, UK	Media Partner
vEGU21: Gather Online (#vEGU21)	19–30 April 2021	Virtual Booth	Paid Sponsorship
IGARSS 2021	12–16 July 2021	Virtual Booth	Paid Sponsorship
AAG 2021	14–16 October 2021	Virtual Booth	Paid Sponsorship
The 28th International Conference on Geoinformatics CPGIS Annual Conference	3–5 November 2021	Nanchang, Jiangxi Province, China	Paid Sponsorship

License Fees for the Society

In the last four years (2016–2019), MDPI paid 129,310.1 CHF (Swiss Francs) in license fees to the

ISPRS Society. The license fees were paid out in quarterly settlements within 14 days after the end of each quarter (Table 8).

Table 8. Annaly Payment to ISPRS Society.

Year	License Fees (CHF)	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2016	15,190.5	560	3755	5258.5	5617
2017	30,539.2	7993	6928.2	7765	7853
2018	38,556.4	9292	10,242.3	10,734.4	8287.7
2019	45,024.0	10,499	11,030	11,235	12,260
2020	55,485.0	15,175	14,610	10,135	15,565
2021	89,320.5	16,407.5	26,859	22,681	23,373

Conclusions

ISPRS *IJGI* has had a very positive performance in the past six years. In 2022, we will continue working

hard to further improving the quality of the published papers, increasing impact factor, enhancing the brand of the journal, and increasing the readership of the journal.

Appendix

Table A1. Top 10 most downloaded papers published in 2016–2022.

#	Title	Author name	Downloads
1	Automatic Geodata Processing Methods for Real-World City Visualizations in Cities: Skylines	Jan Pinos, Vit Vozenilek and Ondrej Pavlis	18,228
2	Trends and Opportunities of BIM-GIS Integration in the Architecture, Engineering and Construction Industry: A Review from a Spatio-Temporal Statistical Perspective	Yongze Song, Xiangyu Wang, Yi Tan, Peng Wu, Monty Sutrisna, Jack C. P. Cheng and Keith Hampson	16,249
3	Indoor Fingerprint Positioning Based on Wi-Fi: An Overview	Shixiong Xia, Yi Liu, Guan Yuan, Mingjun Zhu and Zhaoxue Wang	15,940
4	Analysis of Attraction Features of Tourism Destinations in a Mega-City Based on Check-in Data Mining—A Case Study of Shenzhen, China	Zhihui Gu, Yan Zhang, Yu Chen and Xiaomeng Chang	15,556
5	A Comparative Analysis of the Distributions of KFC and McDonald's Outlets in China	Yikang Rui, Huang Huang, Min Lu, Bao Wang and Jiechen Wang	15,524
6	GIS and Transport Modeling—Strengthening the Spatial Perspective	Martin Loidl, Gudrun Wallentin, Rita Cyganski, Anita Graser, Johannes Scholz and Eva Haslauer	14,549
7	A State-of-the-Art Review on the Integration of Building Information	Xin Liu, Xiangyu Wang, Graeme Wright, Jack C. P. Cheng, Xiao Li and Rui Liu	14,032

	Modeling (BIM) and Geographic Information System (GIS)		
8	Crowdsourcing, Citizen Science or Volunteered Geographic Information? The Current State of Crowdsourced Geographic Information	Linda See, Peter Mooney, Giles Foody, Lucy Bastin, Alexis Comber, Jacinto Estima, Steffen Fritz, Norman Kerle, Bin Jiang, Mari Laakso, Hai-Ying Liu, Grega Milčinski, Matej Nikšič, Marco Painho, Andrea Pöddör, Ana-Maria Olteanu-Raimond and Martin Rutzinger	13,928
9	Corporate Editors in the Evolving Landscape of OpenStreetMap	Jennings Anderson, Dipto Sarkar and Leysia Palen	12,876
10	Land Use and Land Cover Change Modeling and Future Potential Landscape Risk Assessment Using Markov-CA Model and Analytical Hierarchy Process	Biswajit Nath, Zhihua Wang, Yong Ge, Kamrul Islam, Ramesh P. Singh and Zheng Niu	12,011

Table A2. Top 10 most cited papers published in 2016–2022.

#	Title	Authors	Citations	Publication Year
1	Crowdsourcing, Citizen Science or Volunteered Geographic Information? The Current State of Crowdsourced Geographic Information	Linda See, Peter Mooney, Giles Foody, Lucy Bastin, Alexis Comber, Jacinto Estima, Steffen Fritz, Norman Kerle, Bin Jiang, Mari Laakso, Hai-Ying Liu, Grega Milčinski, Matej Nikšič, Marco Painho, Andrea Pöddör, Ana-Maria Olteanu-Raimond and Martin Rutzinger	180	2016
2	A State-of-the-Art Review on the Integration of Building Information Modeling (BIM) and Geographic Information System (GIS)	Xin Liu, Xiangyu Wang, Graeme Wright, Jack C. P. Cheng, Xiao Li and Rui Liu	121	2017
3	User-Generated Geographic Information for Visitor Monitoring in a National Park: A Comparison of Social Media Data and Visitor Survey	Vuokko Heikinheimo, Enrico Di Minin, Henriikki Tenkanen, Anna Hausmann, Joel Erkkonen and Tuuli Toivonen	107	2017
4	mgwr: A Python Implementation of Multiscale Geographically Weighted Regression for Investigating Process Spatial Heterogeneity and Scale	Taylor M. Oshan, Ziqi Li, Wei Kang, Levi J. Wolf and A. Stewart Fotheringham	105	2019
5	Indoor Fingerprint Positioning Based on Wi-Fi: An Overview	Shixiong Xia, Yi Liu, Guan Yuan, Mingjun Zhu and Zhaohui Wang	96	2017
6	Evaluation of Feature Selection Methods for Object-Based Land Cover Mapping of Unmanned Aerial Vehicle Imagery Using	Lei Ma, Tengyu Fu, Thomas Blaschke, Manchun Li, Dirk Tiede, Zhenjin Zhou, Xiaoxue Ma and Deliang Chen	96	2017

	Random Forest and Support Vector Machine Classifiers			
7	Multi-Temporal Land Cover Classification with Sequential Recurrent Encoders	Marc Rußwurm and Marco Körner	92	2018
8	Land Use/Land Cover Dynamics and Modeling of Urban Land Expansion by the Integration of Cellular Automata and Markov Chain	Bhagawat Rimal, Lifu Zhang, Hamidreza Keshtkar, Barry N. Haack, Sushila Rijal and Peng Zhang	81	2018
9	Trends and Opportunities of BIM-GIS Integration in the Architecture, Engineering and Construction Industry: A Review from a Spatio-Temporal Statistical Perspective	Yongze Song, Xiangyu Wang, Yi Tan, Peng Wu, Monty Sutrisna, Jack C. P. Cheng and Keith Hampson	79	2017
10	Detection of Land Use/Land Cover Changes and Urban Sprawl in Al-Khobar, Saudi Arabia: An Analysis of Multi-Temporal Remote Sensing Data	Muhammad Tauhidur Rahman	77	2016

Table A3. Activities of Editorial Board members in 2016–2022 (up to January 2022).

First Name	Last Name	Submissions	Reviews	Decisions History	Special Issues
Amr	Abd-Elrahman	1	1	9	1
Ozgun	Akcay	2	11	55	0
Raffaele	Albano	3	0	55	2
Christoph	Aubrecht	0	0	7	0
Luigi	Barazzetti	1	2	11	2
Arpad	Barsi	0	8	6	1
Norbert	Bartelme	0	1	42	0
Alberto	Belussi	1	2	23	2
Michela	Bertolotto	2	6	2	0
Thomas	Blaschke	25	0	19	1
Gloria	Bordogna	8	12	20	2
Giuseppe	Borruso	0	13	96	2
Barbara P.	Buttenfield	1	5	0	1
Massimiliano	Cannata	1	4	10	1
Christos	Chalkias	8	5	17	1
Jun	Chen	1	0	2	1
Tao	Cheng	1	1	2	0
Tao	Cheng	2	0	8	1

Filiberto	Chiabrando	5	2	16	1
Christophe	Claramunt	7	23	7	0
Eliseo	Clementini	1	2	32	2
Andrew	Crooks	0	0	1	0
Sagi	Dalyot	6	3	10	1
Gino	Dardanelli	2	1	0	0
Leila	De Floriani	0	0	1	0
Philippe	De Maeyer	14	0	0	0
Nico	de Weghe	8	4	1	0
Mahmoud Reza	Delavar	6	1	3	2
Suzana	Dragicevic	3	0	6	1
Matt	Duckham	0	0	1	0
Manfred	Ehlers	0	0	0	0
Fazlay S.	Faruque	4	0	39	1
Sérgio	Freire	0	0	0	0
Dieter	Fritsch	3	5	12	2
Cristiano	Fugazza	7	12	9	1
Mark	Gahegan	0	1	0	1
Georg	Gartner	3	1	51	2
Yola	Georgiadou	7	1	6	2
Chris	Gold	0	0	0	0
Suchi	Gopal	0	0	1	0
Gerardo	Grelle	1	3	10	1
Lars	Harrie	8	11	11	1
Francis	Harvey	1	10	0	1
Geoffrey	Hay	3	1	11	1
Marco	Helbich	3	10	39	2
Hartwig H.	Hochmair	6	6	13	2
Haosheng	Huang	0	0	6	3
Bin	Jiang	13	0	11	1
Derek	Karssenber	0	0	0	1
Marinos	Kavouras	0	0	9	0
Milan	Konecny	3	2	20	2
Bart	Kuijpers	7	3	17	2
Marcin	Kulawiak	1	5	6	1
Mei-Po	Kwan	12	2	26	3
Sébastien	Lefèvre	5	0	9	0
Michael	Leitner	10	1	20	2

Jason	Levy	1	1	62	6
Stefan	Leyk	4	1	1	1
Zhenlong	Li	1	5	13	0
Ki-Joune	Li	0	1	7	0
Paul A.	Longley	1	0	0	0
Marguerite	Madden	1	3	20	3
Yannis	Maniatis	0	0	0	0
Ali	Mansourian	5	4	11	1
Bruno	Martins	1	0	2	0
Beata	Medynska-Gulij	9	9	15	1
Antoni	Moore	4	5	1	0
Silvia	Nittel	0	2	0	0
Marco	Painho	10	6	5	0
Panagiotis	Partsinevelos	1	2	15	1
Ammatzia	Peled	0	0	2	0
Michael P.	Peterson	0	8	3	0
George P.	Petropoulos	3	1	22	0
Chris	Pettit	5	0	1	1
Karin	Pfeffer	4	0	11	1
Robert	Pontius Jr	2	1	2	0
Biswajeet	Pradhan	12	0	23	0
Bernd	Resch	12	2	28	3
Sergio	Rey	1	0	0	0
Fulvio	Rinaudo	3	6	16	2
Faramarz	Samavati	5	0	1	0
Maribel Yasmina	Santos	2	0	1	1
Jochen	Schiewe	8	3	14	1
Markus	Schneider	0	0	0	0
Monika	Sester	3	1	10	2
Himan	Shahabi	6	0	4	0
Shih-Lung	Shaw	6	2	17	2
Wenzhong	Shi	5	1	0	0
Andrew	Skidmore	0	0	7	0
Giulia	Sofia	1	2	3	1
Gunho	Sohn	2	0	9	1
Kathleen	Stewart	1	3	9	1
Josef	Strobl	2	4	26	1
Rafael	Suárez-Vega	2	5	15	1

Michael	Szell	1	0	4	1
Xinming	Tang	1	0	0	0
Nicholas	Tate	0	0	0	0
Fraser	Taylor	1	0	6	1
José António	Tenedório	1	10	22	1
Jean-Claude	Thill	4	1	23	1
Vladimir	Tikunov	0	0	0	0
Veronica	Tofani	1	0	16	1
Ron	van Lammeren	0	5	0	1
Bastiaan	Van Loenen	2	0	0	1
Vit	Vozenilek	4	0	11	0
John P.	Wilson	2	2	2	0
Stephan	Winter	4	6	3	1
Qiming	Zhou	3	0	24	2
Motti	Zohar	0	1	12	1

Report of the Editor-in-Chief on the ISPRS Open Journal of Photogrammetry and Remote Sensing, George Vosselman, Editor in Chief 2021-22

The start of a new Open Access journal

Society increasingly demands science to be open, including open access publications, open data, and open software. While the ISPRS International Journal of Geo-Information is an Open Access journal, the ISPRS Journal of Photogrammetry and Remote Sensing is a hybrid journal. As flipping the latter journal to an Open Access journal could potentially lead to a lower number of submissions (and thereby to a reduction of society income), the ISPRS Council decided to launch a new Open Access journal on photogrammetry and remote sensing to ensure that articles in the entire spectrum of the ISPRS can be published Open Access. After negotiations with Elsevier, the ISPRS Open Journal of Photogrammetry and Remote Sensing was launched on 1 January 2021. The journal has the same aims and scope as the well-established ISPRS Journal of Photogrammetry and Remote Sensing. Both journals also share the Editorial Advisory Board. Various activities were employed to make a start with the new journal.

Vouchers for attracting high-quality papers

Although the emphasis on publishing in journals with a high impact factor is diminishing (see e.g. the [San Francisco Declaration on Research Assessment, DORA](#)), many researchers target journals with a high impact factor. A first impact factor can only be calculated three years after the start of a journal. In the first three years, a journal will only attract submissions from authors that do not require publication in journals with an impact factor. Elsevier provides 30 vouchers per year to waive article processing charges to stimulate submission to the new journal. While some 60 scientists were invited to submit an article free of charge, only 13 articles were submitted of which 7 could be accepted before the end of 2021.

Communications

The launch of the new journal has been communicated in the ISPRS eBulletin as well as in dedicated ISPRS Announcements. Furthermore, ISPRS 2nd vice-president Charles Toth, in charge of

publications in the ISPRS Council, and the Editor-in-Chief were interviewed by Elsevier to mark the launch of the new journal and explain the rationale behind it. This [interview](#) has been published on the journal's website.

Manuscripts are submitted through the Editorial Manager of Elsevier. The log-in page of both the ISPRS Open Journal of Photogrammetry and Remote Sensing and the ISPRS Journal of Photogrammetry and Remote Sensing contain a text to inform authors on the differences between the two journals. Authors intending to submit to the ISPRS Journal of Photogrammetry and Remote Sensing will thereby also be informed on the existence of the new Open Access journal.

Manuscript handling

After running the journal for only one year, only a few statistics on manuscript handling can be provided. In total 39 manuscripts were submitted in 2021. A final decision was made for 27 manuscripts. 11 were accepted and 16 were rejected. A desk reject (reject without reviews) was made for 13 of the 16 rejected manuscripts. The relatively high acceptance rate of 41% is explained by the fact that 7 of the 11 accepted manuscripts were submitted by invited authors. 4 manuscripts were withdrawn (typically because the authors mistook the journal for the ISPRS Journal of Photogrammetry and Remote Sensing). The remaining 8 manuscripts were under review or revision at the end of 2021. On average 18.3 weeks were needed from initial submission to the final acceptance of a manuscript.

Editorial team

Editor-in-Chief and Associate Editors

The ISPRS Open Journal of Photogrammetry and Remote Sensing started with one Editor-in-Chief and two Associate Editors.

Name	Institution	Country	Subject areas handled
<i>Editor-in-Chief</i>			
George Vosselman	University of Twente	The Netherlands	Photogrammetry, laser scanning

<i>Associate Editors</i>			
Eija Honkavaara	Finnish Geodetic Institute	Finland	Remote Sensing
Michele Volpi	Swiss Data Science Center, ETH Zurich, EPFL	Switzerland	Machine learning

Editorial Advisory Board

The Journal's Editorial Advisory Board is shared with the ISPRS Journal of Photogrammetry and Remote Sensing and consists of internationally well-recognized scientists.

Elsevier

The Editor-in-Chief is in regular contact with the Publisher based in Amsterdam, the Netherlands, and the Journal Manager based in Chennai, India. When needed the Journal Manager contacts the technical support to solve issues with the configuration of the manuscript handling system Editorial Manager.

Name	Function	Service period
Kostas Bischiniotis	Associate Publisher	Since January 2021
Prakash Marudhu	Journal Manager	January 2021 – August 2021
Edna Jayaseelan	Journal Manager	Since August 2021

Report of the ISPRS Book Series Editor, Zhilin Li, 2016-2020

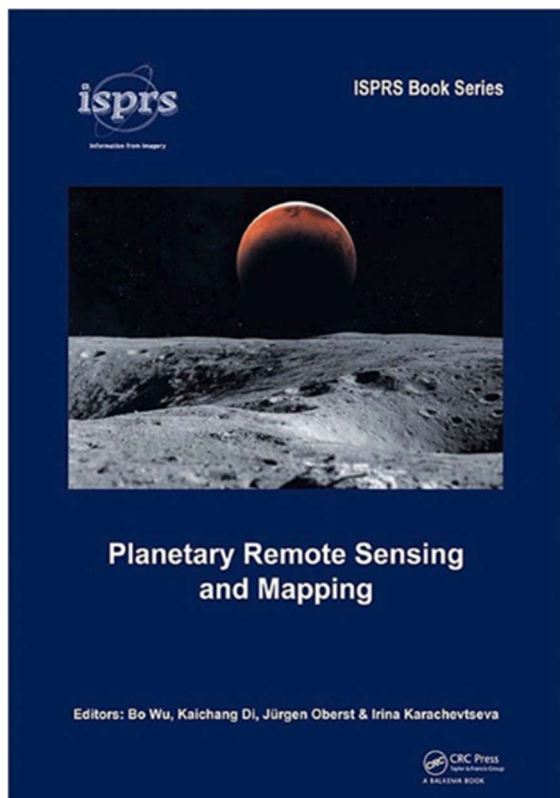
The Book Series editor stepped down from the position in 2020. This report covers the work during 2016-2020.

A call for book proposal was sent to ISPRS working groups, however, very few proposals have been received.

The editor, Zhilin Li, made a Proposal for a Special Volume to Celebrate the 80th Anniversary of the ISPRS Journal of Photogrammetry and Remote Sensing (formerly Photogrammetria). This proposal was approved by the Council, but we failed to produce the volume because of the copyright problem.

In the period 2016-2020, the following books have been published in the ISPRS Book Series:

Advances in Planetary Remote Sensing and Mapping



By Bo Wu, The Hong Kong Polytechnic University, Hong Kong

Kaichang Di, Chinese Academy of Sciences, China

Jürgen Oberst, German Aerospace Center, Germany

Irina Karachevtseva, Moscow State University of Geodesy and Cartography, Russia.

Chapter 1. Introduction

Section A: Highlights from Recent Planetary Exploration Missions

Chapter 2. Exploring the Ancient Martian Geologic Record Using the Opportunity and Curiosity Rovers

Chapter 3. The Colour and Stereo Surface Imaging System (CaSSIS) on the ExoMars Trace Gas Orbiter

Chapter 4. Comet 67P/Churyumov-Gerasimenko through the Eyes of the Rosetta/OSIRIS Cameras

Chapter 5. High-Resolution Topography from Messenger Orbital Stereo Imaging

Chapter 6. New Results from the Chang'E-3 Optical Instruments

Chapter 7. Mission Profile and Design Challenges for China's Mars Landing Exploration

Section B: Reference Systems of Planetary Bodies

Chapter 8. Construction of New-Generation Lunar Global Control Network Using Multi-Mission Data

Chapter 9. Enceladus Geodetic Framework

Chapter 10. Height Systems for Telluric Planets

Section C: Planetary Photogrammetry

Chapter 11. A Photogrammetric Pipeline for the 3D Reconstruction of Cassis Images on Board ExoMars TGO

Chapter 12. Optimizing the Distribution of Tie Points for the Bundle Adjustment of HRSC Image Mosaics

Chapter 13. Community Tools for Cartographic and Photogrammetric Processing of Mars Express HRSC Images

Chapter 14. Correcting Spacecraft Jitter in HiRISE Images

Chapter 15. An Iterative Pixel-Level Image Matching Method for Mars Mapping Using Approximate Orthophotos

Chapter 16. A Robust Method for Stereo Visual Odometry Based on Multiple Euclidean Distance Constraint and RANSAC Algorithm

Chapter 17. A Performance Comparison of Feature Detectors for Planetary Rover Mapping and Localization

Section D: Planetary Cartography and GIS

Chapter 18. From Planetary Cartography to Planetary Spatial Data Infrastructure

Chapter 19. Planetary Cartography and Mapping: Where We Are Today, and Where We Are Heading for?

Chapter 20. PSUP: A Planetary Surface Portal

Chapter 21. Trek Portals - Solar System Mapping and Modelling

Chapter 22. Service-Oriented Visualization of Planetary Surface Geospatial Data

Chapter 23. Large-Scale Slope Analysis on Mars Based on Correlation of Slopes Derived with Different Baselines

Section E: Planetary Remote Sensing Data Fusion

Chapter 24. Fusion of Multi-Scale DEMs from Descent and Navcam Images of Chang'E-3 Using Compressed Sensing Method

Chapter 25. High Precision Co-Registration of Lunar Images and Digital Terrain Models Constrained by both Geometric and Photometric Information

Chapter 26. Accurate Registration of the Chang'E-1 IIM Data Based on LROC-WAC Mosaic Data

Chapter 27. Comparative Study of Lunar Roughness from Multi-Source Data

Section F: Information Extraction from Planetary Remote Sensing Data

Chapter 28. Automatic Detection of Secondary Craters and Mapping of Planetary Surface Age Based on Lunar Orbital Images

Chapter 29. Small Craters and Their Diagnostic Potential

Chapter 30. A Bayesian Network Framework for Automatic Detection of Lunar Impact Craters Based on Optical Images and DEM Data

Chapter 31. Elemental and Topographic Mapping of Lava Flow structures in Mare Serenitatis on the Moon

Chapter 32. Retrieval of Mineral Abundances of the Delta Region in Eberswalde, Mars

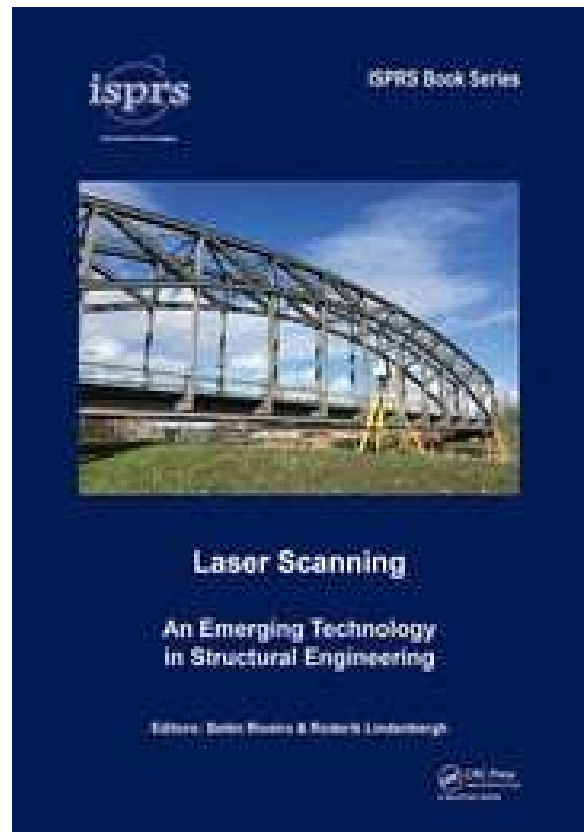
Chapter 33. Spectral Unmixing Based Construction of Lunar Mineral Abundance Maps

Chapter 34. Estimation of Aeolian Dune Migration over Martian Surface Employing High Precision Photogrammetric Measurements

Chapter 35. Mineral Abundance and Particle Size Distribution Derived from In-Situ Spectra Measurements of Yutu Rover of Chang'E-3

Epilogue

Laser Scanning: An Emerging Technology in Structural Engineering



by Belén Riveiro (School of Industrial Engineering, University of Vigo, Spain) and Roderik Lindenbergh (Dept of Geoscience and Remote Sensing, Delft University of Technology, The Netherlands).

Chapter 1. Introduction

Chapter 2. Multispectral terrestrial Lidar: state of the art and challenges

Chapter 3. Multiplatform mobile laser scanning

Chapter 4. Introduction to mobile mapping with portable systems

Chapter 5. Indoor modelling with laser scanning

Chapter 6. Geometric point cloud quality

Chapter 7. Semantic segmentation of dense point clouds

Chapter 8. Laser scanning for operational multiscale structural monitoring

Chapter 9. A smart point cloud infrastructure for intelligent environments

Chapter 10. Integration of TLS and sonar for the modelling of semi-immersed structures

Chapter 11. Integral diagnosis and structural analysis of historical constructions by terrestrial laser scanning

Chapter 12. Laser scanning for bridge inspection

Chapter 13. Laser scanning data for inverse problems in structural engineering

Chapter 14. Construction site monitoring based on laser scanning data

Chapter 15. Integrated modelling and management information system (MMIS) for SCAN-to-BIM projects

More detailed information can be found from CRC website:

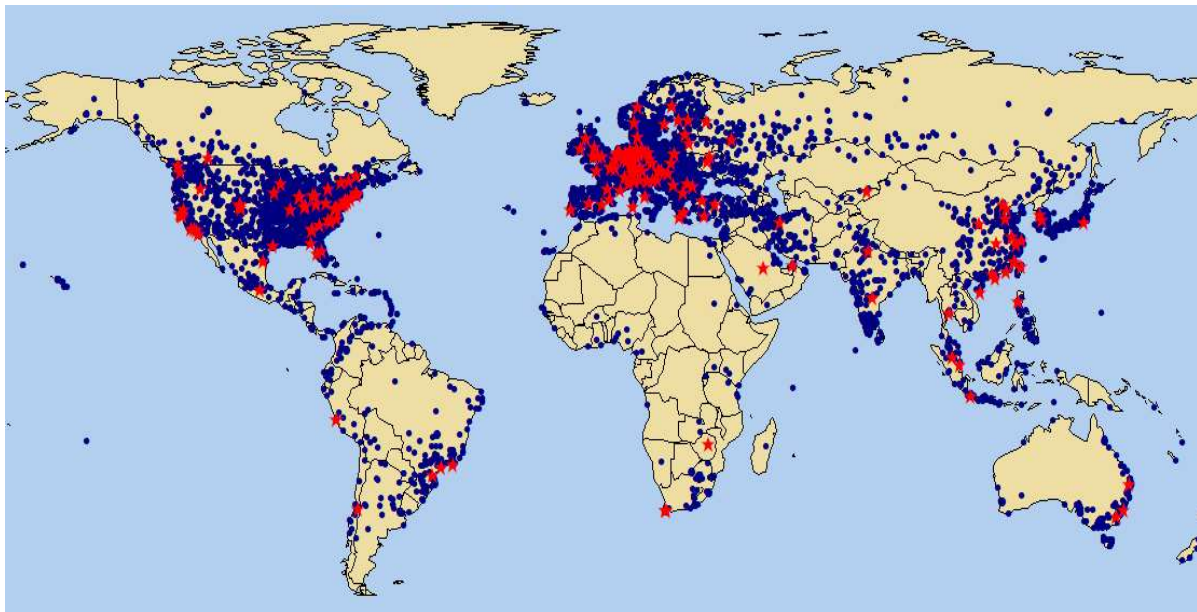
<https://www.crcpress.com/Laser-Scanning-An-Emerging-Technology-in-Structural-Engineering/Riveiro-Lindenbergh/p/book/9781138496040>

Report on the ISPRS Website, Markus English, Web Master

Statistics

Currently, we host 1,200 aspx files (main html files), about 10,700 html files and more than 25,000 PDFs, thereof more than 80% papers. The most visited sites have been publications (Archives and Annals), calendar, job opportunities and announcements. The average number of visitors is still in the same range as in the last term with about 5,000 unique visitors per day.

The map shows where our visitors come from. The red stars mark the most active cities, dark blue circle cities with average activities and the small blue circle cities with lower activities. It shows that the visitors come from around the world but mainly from the Europe, USA, and East Asia.



Map of ISPRS web site visitors

New Homepage and Layout

With the beginning of this term, the structure of the homepage has been changed. Announcements in a teaser version and a link to the full version are now offered. They can even be viewed even after their expiry in an archive.

Since 2020, a new responsive layout is now used for all web pages. This has the advantage that it adapts to different output devices and thus content should be readable even on the smallest devices such as smartphones. With this change, the homepage was expanded in terms of content, taking into account the most sought-after information (most visited pages). Thus, in addition to the latest announcements, quick links to the most visited pages as well as the latest entries in Archives, Annals, calendar and job opportunities can now be found.

Use of databases

Many data and pages are now database-based, e.g. Archives & Annals, TCs & WGs, officers, news, TIF

news, TIF trustees. The calendar now has more options, e.g., further information on the event in an extra window. TC and WG skin pages are generated from these database entries. Commissions, WGs and Officers are now also administered by term, so "historical" data is then still available.

An online form for the TIF travel grants has been created on the TIF website, which then also stores the applications in a database.

Privacy Information Notice

We had to create a privacy information notice due to the European General Data Protection Regulation (GDPR). This can be accessed on all pages via the footer. For new applications for individual membership as well as to the mailing list for the e-Bulletin, applicants must accept the policy.

Hosting

In addition to the main server for the ISPRS web pages, we also host a second system, a content management system, where TCs and WGs can

manage their own pages. In addition to the TIF website, we have also been hosting the Student Consortium website and the websites for the TC II and TC IV Symposia in 2018.

Mailing

Since long emails are more and more in danger of being classified as spam, the e-Bulletin has now been split into a short version for the email

announcement as well as a full version on the web server. With this in mind, care has also been taken to ensure that only the most important announcements are sent to the mailing list.

Report on The ISPRS Foundation (TIF), Stewart Walker, Chair

Introduction

The ISPRS Foundation Inc. is a non-profit entity, managed by a Board of Trustees, which responds to ISPRS grant needs that are identified by ISPRS Council, which will solicit proposals for grants and then collaborate with the Board to support worthy candidates. The Board is responsible for fund raising, investment, management and approval of grants from Foundation funds. Day-to-day operations of the Foundation are managed by an Executive Committee (ExCom), comprising the Chair, Operations Officer and Finance Officer. The Board is kept informed, especially with respect to the budget and the disbursement of grants.

The ISPRS Foundation (TIF) was legally established in August 2003 and the Trustees, comprised of prominent professionals in the fields of ISPRS, were then appointed. TIF has as its aims to improve the ability of ISPRS to satisfy its philanthropic aims and objectives, by administering a broadly-based international program of fund-raising to provide grants to qualified individuals and organizations pursuing and/or applying knowledge for advancing the sciences and technologies associated with the disciplines embodied by ISPRS.

The areas that are expected to be funded by TIF include travel grants, awards, awareness education, distance learning, exchange programs, fellowships, grants, international workshops, internships, preservation and archiving, research initiatives, scholarships, standards projects, tools and literature. It is contributing significantly to the efforts of ISPRS in capacity building, international cooperation and technology transfer. The Foundation has now been in operation for almost 17 years. The first grants were provided to participants to attend the mid-term Symposia in 2006 and further travel grants have been awarded every year except 2021.

Summary of TIF Board of Trustees Decisions Prague 2016

The TIF Board of Trustees last met at the XXIII Congress in Prague, Czech Republic on 27 August 2016. The following decisions were made:

- Council Trustees Chen Jun and Jon Mills were replaced by Christian Heipke and Songnian Li. Stewart Walker was appointed Chair. Dieter Fritsch, who had extended his term till July 2016 in accordance with the decision made during the XXII Congress in Melbourne, Australia, and Juergen Dold indicated a wish to

stand down and it was agreed to seek a replacement for the latter from Trimble.

- The existing officers, John Trinder and Marguerite Madden, were re-elected.
- Jon Mills agreed to continue as chair of Grants Evaluation Committee for one year, after which Songnian Li would take over. Mario Hernandez agreed to join that Committee. The Audit Committee would continue with Lewis Graham (chair), John Trinder and Laurent Polidori. The Marketing & Promotion Committee and the Large Grants Procurement Committee were unstaffed and inactive and should be reviewed.
- Recommendations were made on future members of the Board and committees as listed below.
- Large donors Leica Geosystems, Geoway and IGI were acknowledged. TIF had provided awards of USD 100,000 over the last four years, but donations had not increased, so TIF needed to increase its revenue, for example by fund-raising activities. The investments had not done well.
- Marguerite Madden reported on the awards made over the four years, totalling USD 172,378. TIF should request a donation from Council and construe the Geospatial Week events as a source of additional funds. Similarly, the Board should approach the Congress Director for a larger proportion of the registration income from the XXIV Congress in Nice, France. [Subsequently it was decided not to proceed with this request.]
- Dieter Fritsch undertook to provide annual reports for 2013, 2014 and 2015. Stewart Walker should handle those for 2016 *et seq.* [The reports for 2013, 2014 and 2015 were subsequently abandoned. It was decided no longer to provide annual reports but to create, in addition to this report for the XXIV Congress, a more detailed document about TIF, including historical material and information about award winners, which would appeal to a broader audience and also could be used for marketing purposes.]

TIF Activities and Funding 2016-22 (Travel Grants and Awards for 2016-21 and planned for 2022)

During the past six years, TIF has provided funding for the following activities: 2016 – Total USD 55,496.98
International Workshops: USD 7708.12

2015 YP-GRSS and ISPRS Summer School, Curitiba, Brazil, 26-30 October 2015	2045.66
Support Student Consortium Chair to attend 2016 Brazil Summer School	1575.00
2016 YP-GRSS and ISPRS Summer School, Presidente Prudente, Brazil, 26-30 September 2016	1332.46
15 th Student Consortium - WG VI/5 Summer School, Diyatalawa, Sri Lanka, 22-26 October 2016	2755.00

Travel Grants – USD 35,575.00.

- Partial travel grants were awarded for 62 participants from 33 countries to attend the XXIII Congress in Prague, Czech Republic.

Congress Awards – USD 12,713.86

- Wang Zhizhuo Award (CHF 2500 or USD 2568.66)
- Frederick J. Doyle Award (USD 2512.10)
- Finished and engraved Doyle medal (USD 439.86)

- CATCon (3) Awards - Gold (USD 3098.24), Silver (USD 2536.00) and Bronze (USD 1559.00) - for winners of software contest organized by ISPRS Commission VI Working Group 2, Computer Assisted Teaching and sponsored donor companies.

2017 – Total USD 16,249.07

International Workshops – USD 6950.75

2017 YP-GRSS and 16 th ISPRS Student Consortium and WG V/5 Summer School, Lages, Brazil, 2-6 October 2017, instructor travel	3007.28
17 th Student Consortium - WG VI/5 Summer School at Asian Conference of Remote Sensing (ACRS), New Delhi, India, 23-27 October 2017, Student Consortium Board Members Travel	3943.47

Travel Grants – USD 16,249.07

- ISPRS Hannover Workshop, 'High-Resolution Earth Imaging for Geospatial Information', at Leibniz University Hannover, Germany, 6-9 June 2017 (USD 4298.32), total 6 Travel Grants from 6 countries.

- ISPRS Geospatial Week 2017, Wuhan, China, 18-22 September 2017 (USD 2953.30), total 5 Travel Grants from 5 countries.

2018 - Total USD 35,698.84

International Workshops – USD 9703.07

ISPRS Summer School - Student Consortium - WG VI/5 at Asian Conference of Remote Sensing (ACRS), New Delhi, India, 23-27 October 2017, Student Consortium board member travel	2127.43
ISPRS Summer School, Dehradun, India, 30 October – 3 November, 2017, Indian Institute of Remote Sensing Indian Space Research Organization	4296.00
ISPRS Summer School, Beijing, China, 4-6 May 2018, Student Consortium board members travel	481.48
ISPRS Summer School, at Asian Conference of Remote Sensing (ACRS) 2018, Kuala Lumpur, Malaysia, 20-24 October 2018, Student Consortium board member travel	704.23
2018 IEEE/GRSS – Young Professionals and ISPRS Student Consortium and WG V/5 Summer School, Campo Grande, Brazil, 29 October-4 November 2018, instructor travel	2093.93

Travel Grants – USD 25,995.77

- Partial travel grants were awarded for 41 participants from 21 countries to attend ISPRS Symposia for Commissions I to VIII.

2019 – Total USD 38,915.61

International workshops – USD 14,152.53

ISPRS Summer School, at Asian Conference of Remote Sensing (ACRS) 2018, Kuala Lumpur, Malaysia, 20-24 October 2018, Geoscience and Digital Earth Centre, Univ. Technology Malaysia (3000 EUR) and Student Consortium board member travel	5220.49
ISPRS Summer School, at Geospatial Week, ITC Univ. of Twente, Enschede, The Netherlands, 12 June 2019	2574.65
ISPRS Summer School, Entebbe, Uganda, 22-24 July 2019, Dept. Geomatics and Land Management, Makerere University, instructor travel	1154.82
ISPRS Summer School, Wroclaw University, Poland, 26-30 October 2019, Wroclaw Univ. of Science and Technology (WURST) and Forest Research Institute, Student Consortium board member travel	657.19
ISPRS Summer School, Campo Grande, Brazil 2019, 29 October-4 November 2019, Student Consortium board member travel	2176.23
SERFA-ISPRS SAR Summer School, Sorocaba City, Brazil 2019, 10-14 November 2019, instructor travel	2369.15

Travel Grants – USD 24,763.08

- Photogrammetric Image Analysis (PIA) 2019/HRIGI in Munich, Germany, 18-20 September 2019 (USD 3869.32), total 5 Travel Grants from 3 countries.
- Student Consortium Board Meeting at TC-V Symposium, Dehradun, India, 18-23 November 2018 (USD 2630.09), total 2 Travel Grants from 1 country.

- ISPRS Geospatial Week-2019, 10-14 June 2019, Enschede, The Netherlands, (USD 13,100.00), Total 19 Travel Grants from 15 countries.
- CIPA International Symposium, 1-5 September 2019, Avila, Spain, (USD 5163.67), Total 6 Travel Grants from 5 countries.

2020 – Total USD 5743.96

International workshops – USD 3359.00

ISPRS Summer School, at Asian Conference of Remote Sensing (ACRS) 2019, Daejeon, South Korea, 14-18 October 2019, Korean Society for Remote Sensing for organizing the Summer School (3000 EUR)	3359.00
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Travel Grants – USD 631.44

- XXIV Congress, Nice, France, 12-18 July 2020 (moved to virtual and postponed due to COVID-19) (USD 331.44)*
- Latin American GRSS & ISPRS Remote Sensing (LAGIRS) Conference, Santiago, Chile, 22-27 March 2020 (USD 300.00)*
*These reimbursements reflect expenses paid in advance by TIF Travel Grant recipients that could not be cancelled.

Congress Awards – USD 1753.52

- Frederick Doyle Medals were finished (3) with medal housings (3) and shipping from Alto University, Finland to ISPRS (Hannover, Germany) (USD 1753.32)

2021 – Total USD 2500*

- Frederick Doyle Award recipient, Konrad Schindler (USD 2500.00)

*No TIF travel grants were awarded in 2021 due to travel restrictions and all virtual conferences.

2022 – Total USD 44,532*

Travel Grants – USD 34,600.00

- Partial travel grants were awarded for 63 participants from 23 countries to attend the XXIV Congress in Nice, France.
 - Fee waiver only – 10 awards for a total of €5600, funded by Institut de recherche pour le développement (IRD), as explained later in this report
 - Fee waiver and travel grant – 29 awards for a total of €11,550 for fee waivers, funded by IRD, and \$17,300 cash travel grants, funded by TIF
 - Travel grant only – 24 awards for a total of \$17,300, funded by TIF

Congress Awards – USD 9932 (estimated currency conversion)

- Wang Zhizhuo Award (CHF 2500)
- Frederick J. Doyle Award (USD 2500 paid in 2021)
- 3 finished, engraved and shipped Doyle medals (USD 1753.52 paid in 2020)
- CATCON (3) Awards - Gold (CHF 3000), Silver (CHF 2500) and Bronze (CHF 1500) - for winners of software contest organized by ISPRS WG V/1.

*** This report includes all awards up to and including those related to the XXIV Congress. It is possible that other awards will be made before the end of 2022.**

**** The awards are listed with the currencies and amounts given in the deeds. TIF usually**

pays out awards in USD, using the prevailing ISPRS exchange rates to compute the amounts. The USD amounts given here, in advance of the Congress, are, therefore, estimates.

Summary 2016-22

Total grants for the period 2016-2021 were USD 159,883.62. An additional USD 34,600 for TIF Travel Grants and USD 9932 for Congress Awards (plus 17,150 EUR from the Congress/IRD in reduced registration fees) is expected to be granted in 2022 for the XXIV Congress.

Figures 1a and 1b, respectively, show TIF Travel Grant recipients receiving their awards.



Figure 1. TIF Travel Grant recipients at the Technical Commission I Symposium held in 2018 in Karlsruhe (top), Germany; and Technical Commission IV Symposium held in 2018 in Delft, The Netherlands.

TIF IGI Africa Ambassador Award

IGI has offered the IGI Ambassador Award, via TIF, valued at 2500 EUR per year, to young scientists in photogrammetry and laser scanning coming from regionally under-represented African countries in

the geospatial sciences and technology fields. The award, which allowed for visits at IGI's main office, Kreuztal, Germany, and active participation at ISPRS Workshops, Conferences, and Symposia, was first made in 2016. A further award was made in 2018, but the winner, from Kenya, was unable to obtain a

visa to visit Germany. In 2022, IGI decided to discontinue the award.

AGSI Award

The African Geospatial Sciences Institute (AGSI) was a non-profit NGO established in Tunisia in 2012 to accelerate geospatial capacity development in North Africa. In 2018, however, it decided to cease operations. Its remaining funds, USD 1508.45, were transferred to TIF later that year, to be used as a single award to support attendance by one or two early-career researchers from North African countries in the geospatial sciences and technology fields at the XXIV ISPRS Congress, so the funds would now be used for a 2022 attendee. A Selection Committee to decide the winners comprises Stefan Oeldenberger, Chairman of AGSI; Prof. John Trinder, Operations Officer of TIF; and Dr. Stewart Walker, Chair of the Board of Trustees of TIF. The funds would be exhausted and the award discontinued thereafter. Unfortunately, of the successful candidates for TIF grants to attend the XXIV Congress, none met the criteria for the AGSI Award, so discussions are ongoing between TIF and the officers of AGSI to determine the way forward.

IRD: French research funds in support of attendance at XXIV Congress

Institut de recherche pour le développement (IRD) is a French research organization founded in 1937. Emphasizing interdisciplinarity, IRD has focused its research on the relationship between man and its environment in Africa, the Mediterranean, Latin America, Asia, and the French tropical overseas territories. IRD's research, training, and innovation activities are intended to contribute to the social, economic, and cultural development of southern countries. IRD agreed to provide additional funds of 30,000 EUR to support waiving of registration fees at the XXIV Congress. These grants were to be awarded to applicants from countries and territories eligible to receive official development assistance (ODA). The Grants Evaluation Committee decided which of the successful applicants for TIF travel grants to attend the Congress will be funded from the IRD contribution. 39 fee waivers were made, totalling 17,150 EUR.

ISPRS WEC Kennert Torlegård Travel Grant

A White Elephant Restricted Kennert Torlegård Travel Grant Fund has been established in TIF to support young people to attend ISPRS events and especially the quadrennial ISPRS Congresses. The restricted grant category will be funded by senior members of ISPRS, who are members of the White Elephant Club (WEC - a group of previously or still active senior officers of ISPRS and other recognized persons with close relations to ISPRS, founded in 2004) and wish to demonstrate their continued commitment to the aims and goals of ISPRS. By supporting outstanding young scientists worldwide to attend ISPRS congresses, the Fund will demonstrate the commitment of WEC to the future of ISPRS. The support for these young people will encourage and equip them to take over leadership in ISPRS in the future. Members of WEC donate generously to the Fund to enable TIF to support as many young people as possible to attend ISPRS events. The White Elephants Travel Grants were offered for the first time in 2016 for awardees to attend the XXIII Congress (total 3200.00 USD). A deed was prepared in 2021 formally naming the award as the ISPRS WEC Kennert Torlegård Travel Grant. To be eligible for the Award, the candidate must have produced a high-quality paper in the areas of digital terrain modelling, surface modelling or related topics. This paper can be the one that the candidate plans to present at the ISPRS Congress for which he/she is applying for the Award, provided that it has been accepted by the Congress organizers for presentation and inclusion in the *ISPRS Archives* or *Annals*.

Financial Statements (2016-21)

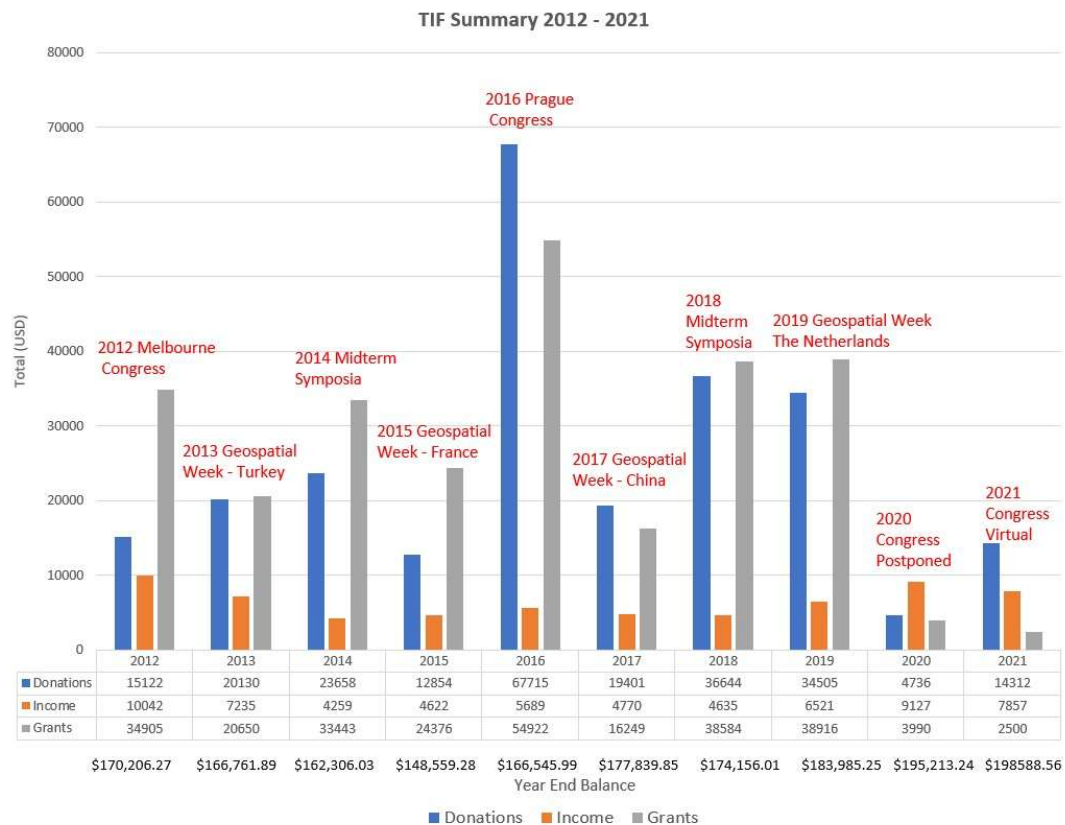
The Bylaws were constructed in accordance with regulations to be exempt from Federal and other taxation. The Foundation's net worth is expressed as Net Fair Market Value (NFMV), which takes into account unrealized gains and losses on investments on an annual basis. Over the past six years, the year-end NFMV in USD, the amount of grants, administrative costs, and investment earnings are listed in Table 1.

Table 1. TIF Net Fair Market Value (NFMV), Grants, Admin Costs, Earnings and Donations

Year-End	NFMV	Grants Distributed	Operating Costs (% of NFMV)	Investment Earnings	Donations
2016	166545.99	61126.14	0.75	5688.61	67715.18
2017	178189.87	15899.07	0.08	4770.35	19401.00
2018	167831.01	35698.84	1.98	4635.70	38157.83
2019	194003.63	38915.61	0.89	5373.13	34405.20
2020	196688.46	5743.96	0.09	17092.92	4735.89
2021	193142.60	2500.00	2.07	7857.22	14312.31
2022 (estimated)	200000	44532	1.00	6000	45000

Summary of Financial Performance

The following graph provides a summary of donations, interest, awards and end-of-year balance for the period 2106-21:



General Comments on Financial Statements

- TIF was informed in November 2021 that the Indian Society of Remote Sensing (ISRS) intended to donate USD 10,000 to TIF. The formalities were completed in March 2022.
- For some years, TIF has used the address of ASPRS in Bethesda, Maryland, USA as its formal address. ASPRS, however, has begun to use the address of the association management company that handles much of

its administrative and financial work, in Baton Rouge, Louisiana, USA. As of this writing, TIF was investigating whether action is needed. ASPRS still owns the building in Bethesda, so it may be possible for TIF to continue using this address.

- As of this writing, the accounts for the period 2016-21 were in an advanced stage of preparation and it was expected that these would be presented to the Audit Committee before the XXIV Congress.

Acknowledgement of Major Donors

TIF is grateful to the following organizations for their support and generous donations:

- Leica Geosystems, for its donations of CHF 5000 per year (period 2012-2022)
- IGI, Kreuztal, Germany, for its donation of 2500 EUR in 2016 to support the TIF IGI Ambassador Award
- The Ministry of Municipal and Rural Affairs, Saudi Arabia, for its Unrestricted donation of USD 2000 in 2019
- The National Administration of Surveying, Mapping and Geoinformation, China, for its donation of CHF 2500 in 2008 and 2012 and USD 2500 in 2016 and 2022 to cover the Wang Zhizhou Award (USD 2550 in 2016)
- Members of the White Elephant Club, for generously donating annually to TIF
- ISRS, for its donation of USD 10,000 in 2022.
- ISPRS Council for continued financial support for TIF activities over the past six years
- ISPRS Council and the event organizers, for enabling TIF to receive donations from Congress and GeoWeek registrations:
 - 2016 – XXIII Congress, Prague, Czech Republic, USD 4927.47
 - 2017 – Geospatial Week, Wuhan University, Wuhan, China, USD 2236.00
 - 2019 – Geospatial Week, ITC Twente University, Enschede, The Netherlands, USD 2879.95
 - 2022 – XXIV Congress, Nice, France, USD 2000 (estimated)

Board of Trustees – 2016-2022

The Board of Trustees comprises 11 persons, who are appointed by ISPRS Council. Only two members of the Board of Trustees may be members of the existing Council of ISPRS. Trustees are leaders in fields of the photogrammetry, remote sensing and spatial information sciences, who have significant knowledge and experience in the needs of industry and governments. Membership of the Board reflects the international character and diversity of the Society. Trustees do not receive any salary or other compensation for their services.

Special thanks and acknowledgements are extended to all present and past Board members for their commitment and contributions to the work of TIF.

Current Board Members

Stewart Walker, photogrammetry4u, San Diego, California, USA – Chair and ExCom member – newly appointed 2016

John Trinder, University of New South Wales, Sydney, Australia – Operations Officer and ExCom member

Marguerite Madden, University of Georgia, Athens, Georgia, USA – Finance Officer and ExCom member

Ron Bisio, Trimble, Westminster, Colorado, USA – newly appointed 2017

Sandra Maria Fonseca da Costa, UNIVAP, São José dos Campos, SP, Brazil – newly appointed 2020

Michael Gruber, Vexcel Imaging, Graz, Austria – newly appointed 2019

Christian Heipke, Leibniz University Hannover, Hannover, Germany – ISPRS Council representative

Lawrie Jordan, Esri, Redlands, USA

Songnian Li, Ryerson University, Toronto, Canada – ISPRS Council representative

Shailesh Nayak, National Institute of Advanced Studies, Bangalore, India – newly appointed 2019

Qihao Weng, Hong Kong Polytechnic University, Hong Kong – newly appointed 2021

Former Board Members

Li Deren, Wuhan University, Wuhan, China (term ended 2018, but he continued until Qihao Weng was appointed)

Lewis Graham, GeoCue Group, Madison, Alabama, USA (resigned 2019)

Mario Hernandez, Mies, Switzerland (term ended February 2020, but he continued until Sandra Maria Fonseca da Costa was appointed)

Mazlan Othman, International Science Council for Science Regional Office for Asia and the Pacific, Kuala Lumpur, Malaysia (term ended 2018, but she continued until Shailesh Nayak was appointed)

Office Bearers – 2016-2022

Chair – Stewart Walker

Operations Officer – John Trinder

Finance Officer – Marguerite Madden

Board Meetings

A meeting of the TIF Board of Trustees was held on 27 August 2016 during the XXIII Congress, with eight Board members in attendance and Stewart Walker via Skype. See above.

A meeting will be held in Nice, France, during the XXIV Congress.

Committees

The Board eliminated the Marketing and Promotions Committee and Large Grants Procurement Committee in 2019, since they were not active, and replaced them with the Fund-Raising Committee (see below). Thus, the following Committees assist TIF in its operations. Members of these Committees and Terms of Reference are given in the Appendix.

- Audit Committee
 - Executive Committee
 - Fund-Raising Committee
 - Grants Evaluation Committee
- The Executive Committee held 11 meetings from December 2016 to March 2022. Each meeting was carefully minuted and the results sent to the Board of Trustees.
 - It became clear during the period 2016-18 that not only were the Marketing and Promotions Committee and the Large Grants Procurement Committee ineffective, but there was little significant growth in TIF's funding, so no expansion could be expected in its activities. It was decided to form a Fund-Raising Committee to solicit donations in a planned, measured way. Terms of reference were developed in 2018 and Michael Gruber became chair in 2019. He has recruited nine members (see Appendix), with the goal of covering the globe as widely as possible. By the end of 2021, the Committee had developed lists of possible donors in several countries and began sending packages of material to carefully selected individuals in the prospective donor organizations. In each case, the Committee selected which of its members would be best to make contact, or whether to ask a trustee to do so instead. As of this writing, 80 organizations in 32 countries, including Africa, the Middle East and India, had been approached. It is hoped that initial successes will be reported at the meeting of the Board of Trustees during the XXIV Congress.

Marketing and Website

TIF updated its brochure and PowerPoint presentation several times during 2016-22. The latest versions are on the website and have been distributed to the Board of Trustees to be used more widely.

Throughout the period, TIF has been supported meticulously and enthusiastically by Markus English, the ISPRS webmaster at the University of Stuttgart, Stuttgart, Germany, who has ensured that all requested changes to the TIF web pages were made immediately.

TIF is aware that a stronger presence on social media would be beneficial, in terms of not only attracting more applications for grants but also publicizing its work and attracting donors. Whereas there had been 216 applications for grants for the XXIII Congress, there were only 69 for the XXIV. Though this was partly the result of the two postponements and the associated uncertainty, it seems clear that TIF's activities need to be better known amongst students and early-career researchers.

Conclusions and Outlook

The continued need to provide assistance to young scientists to attend international workshops and ISPRS sponsored events has placed strong demands on TIF to attract funds. Nevertheless, TIF has been able to provide assistance to many young scientists from developing countries throughout the past six years.

The Net Fair Market Value (NFMV) has not increased to satisfy the Board's resolutions in 2012 to boost capital by 5% per year and providing USD 30,000 per year in grants. However, despite the difficult financial times the NFMV has risen slowly from the amount of approximately USD 170,000, thanks to the generous support of major donors for which the Board is very much appreciative. All persons involved in ISPRS are urged to seek donors for TIF so that its very beneficial work can continue. The path to growth inevitably involves more donations, so the Fund-Raising Committee has been created to address this. The activities of this committee will be critical to TIF's growth.

Certain obstacles impede the progress of TIF. It has proved difficult to recruit trustees, as a result of which many trustees have served beyond the two three-year terms specified in the bylaws. It has been even more difficult to recruit trustees to replace the Finance Officer and Operations Officer, both in their 4th terms. Nevertheless, once the duties of several individuals are clarified during the XXIV Congress, it should be possible to move forward. We hope that the trustees will become more engaged in TIF, for example by assisting the Fund-Raising Committee, and that we will thus be able to benefit fully from these talented, successful individuals, who volunteer their time to TIF.

APPENDIX – TIF COMMITTEES

Audit Committee

Terms of Reference of Audit Committee

The responsibilities of the Audit Committee are to advise the Board of Trustees with its:

1. Submission of a report every February of its findings resulting from its independent examination and audit of all Foundation income and expenses of the preceding year.
2. Recommendations for improving the rules and procedures governing the receipt, anonymity and investment of gifts and donations, consistent with Foundation Bylaws and with federal and state law.
3. Recommendations for improving the rules and procedures governing the disbursement of grants, consistent with Foundation Bylaws and with federal and state law.
4. Prompt review of all proposed Foundation contracts and agreements to ensure consistency with Foundation Bylaws, as may be deemed necessary to carry on the business of the Foundation.
5. The term of members of the Committee will be three (3) years, with the term of the Chair for one (1) year, when it will be passed to another member of the Committee.

Members of Audit Committee

Chair and Trustee – Shailesh Nayak, National Institute of Advanced Studies, Bangalore, India

Trustee and Operations Officer – John Trinder, Australia

Trustee – Qihao Weng, Hong Kong Polytechnic University, Hong Kong

Member – Laurent Polidori, CESBIO, Toulouse, France

Executive Committee

Terms of Reference of Executive Committee

1. Address daily issues (ongoing)
2. Set agenda for Board meetings (annual)
3. Draft documents (ongoing)
 - terms of reference;
 - operating procedures;
 - publicity;
 - investment policy;
 - annual reports

Members of Executive Committee

Chair and Trustee – Stewart Walker, USA

Member, Trustee and Operations Officer – John Trinder, Australia

Member, Trustee and Finance Officer – Marguerite Madden, University of Georgia, Athens, Georgia

Fund-Raising Committee

Terms of Reference of Fund-Raising Committee

Support the Board of Trustees with the following:

1. Identify and follow up opportunities to increase funding from international grant-funding agencies/foundations, private sector organizations and government organizations
 - a. Identify prospective donors likely to be sympathetic to the goals of ISPRS and TIF
 - b. Publicize the aims of ISPRS and TIF to these organizations
 - c. Develop appropriate procedures and points of contact for approaching, then applying for grants or seeking donations from, these organizations
 - d. Develop procedures for renewal/maintenance of annual grants and donations from these organizations
 - e. Following on from §1(a)-(d) above, take actions jointly with the Board of Trustees to secure grants or donations or renewals from these organizations.
2. Identify and follow up other opportunities to increase funding
 - a. Identify opportunities to increase funding levels from existing donors
 - b. Identify new opportunities to raise funds, e.g. within ISPRS and/or TIF
 - c. Identify individuals who may be interested in donating
 - d. Following on from §2(a)-(c) above, take actions jointly with the Board of Trustees to secure donations.
3. Publicize the goals and work of TIF worldwide
 - a. Identify target audiences that may not be aware of TIF
 - b. Develop appropriate communications materials, including but not limited to brochure, PowerPoint presentation, website
 - c. Following on from §3(a)-(b) above, take actions jointly with the Board of Trustees to use these materials and ensure that TIF's message reaches the target audiences.

Members of Fund-Raising Committee

Chair and Trustee – Michael Gruber, Vexcel Imaging, Graz, Austria

Member and Trustee – Ron Bisio, Trimble, Westminster, Colorado, USA

Member and Trustee - Sandra Maria Fonseca da Costa, UNIVAP, São José dos Campos, SP, Brazil

Member and Trustee – Lawrie Jordan, Esri, Redlands, California, USA

Member and Trustee – Qihao Weng, Hong Kong Polytechnic University, Hong Kong

Member – Paul Marshall, Southampton, UK

Member – Fabio Menna, Fondazione Bruno Kessler, Trento, Italy

Member – Marko Pasko, Expert_for_3D_Landscape, Bratislava, Slovak Republic

Member – Miguel Pelaz, GeoToolBox Ibérica, Madrid, Spain

Member – Sisi Zlatanova, University of New South Wales, Sydney, Australia

Grants Evaluation Committee

Terms of Reference of Grants Evaluation Committee

1. Make recommendations to the Board of Trustees on priorities for grants in any 12-month period.
2. Consider applications for grants and make recommendations to the Board of Trustees.
3. Generally advise the Board on matter relating to grants.

Members of Grants Evaluation Committee

Chair and Trustee – Songnian Li, Ryerson University, Toronto, Canada

Member - Nguyen Dinh Duong, Vietnam Academy of Science and Technology, Hanoi, Vietnam

Member - Hussein Farah, Kenya

Member and Trustee – Mario Hernandez, Mies, Switzerland

Member - Rakesh Malhotra, North Carolina Central University, Durham, USA

Member - Norbert Pfeiffer, T U Wien, Vienna, Austria

Member - Sisi Zlatanova, University of New South Wales, Sydney, Australia

Report of the International Policy Advisory Committee (IPAC), Gunter Schreier, Chair

IPAC Organizational Issues

According to its Terms of Reference, the International Policy Advisory Committee (IPAC) of ISPRS shall advise Council on issues relevant to Society interaction with intergovernmental organizations and shall – specifically - identify, coordinate and prioritize issues on which ISPRS should have a public policy. These issues include legal and policy challenges, data and information policy and industrial developments.

Chaired by Gunter Schreier (German Aerospace Center, DLR) in the entire reporting period, IPAC addressed these duties in supporting the council in topics raised by UNOOSA and other international bodies. Furthermore, IPAC supported the organization related workshops in the reporting period.

IPAC reviewed its 2016 – 2020 Workplan, in close contact with the ISPRS council. The revision of early

2017 included the main duties of IPAC and the chair of IPAC:

- Continue to support ISPRS council; discuss and raise awareness to policy issues
- Manage IPAC, its membership and relations to ISPRS Council
- Adapt and modify Terms of Reference and IPAC structure where necessary
- Representation at and cooperation with international organizations
- Organize and conduct topic workshops and conferences
- Contribute to or organize major publications in IPAC topics

A further revision of the work plan is now planned for the IPAC meeting during the 2022 Congress.

By end 2019, IPAC also renewed its membership. IPAC has now 14 members presenting academia, organisations and companies coming from nearly all continents:

Gunter Schreier (chair)	DLR, Germany	Germany
Sias Mostert	SCS Space (Pty) Ltd South Africa. Member board of trustees for AARSE	South Africa
Frans Von der Dunk	University of Nebraska, Lincoln, USA	USA
George Cho	University Canberra, Australia	Australia
Michael Rast	ESA ESRIN, Italy	EU, Italy
Barbara Ryan	executive director of the World Geospatial Industry Council (WGIC).	INT, USA
Marcello Maranesi	CEO, GMATCIS, Rome, Italy	Italy
Einar Bjorgo	UNITAR-UNOSAT, UN - Switzerland	INT, Swizz
Andre Nonguierma	UN Economic Commission for Africa, UN- Ethiopia	INT, Ethiopia
Fabio Tronchetti	University of Beijing and University of Mississippi	USA
Giovanni Marchisio	VP of Applied Analytics, Planet	USA, Italy
Jide Kufoniyi	Professor of Geoinformatics, Obafemi Awolowo University Ex ISPRS Reg.Rep. for Africa and former President, AARSE	Nigeria
Thomas Blaschke	University of Salzburg, Department of Geoinformatics - Z_GIS, Austria	Austria
Laurent Polidori	CESBIO, Toulouse, France	France

The actual list of members is here:
<https://www.isprs.org/structure/ipac.aspx>

IPAC is actually looking for more new female members and new members from South America. Proposals for a new membership list of IPAC will tabled in early 2022.

Organization of Sessions, Workshops and Round Table Discussions

ISPRS UN-GGIM National Mapping and Cadastre Agency (NMCAF) and ISPRS-IAA Space Agency (SAF) Forum



This forum featured on July 14-15, 2016 during the ISPRS congress in Prague. The overall motivation for this joint forum has been the plans of Space Agencies in the sphere of data for National Mapping and Cadastral Agencies; how can this cooperation be strengthened? How do National Mapping and Cadastral Agencies use satellite remote sensing data, what would they like to see improved?

The NMCAF part was organized and chaired by André Streilein and Julius Ernst representing EuroSDR, the SAF part by Gunter Schreier and Ian Dowman representing ISPRS. The SAF part was also

supported by the International Academy of Astronautics (IAA), announced as the first ISPRS-IAA Space Agency Forum.

The forum featured four sessions with 17 speakers for the NMCAF part and four sessions with 16 speakers from agencies and companies for the SA part. Quite some high-level speakers have been president of agencies or CEOs of companies. In addition, in 3 joint sessions common aspects have been covered, concluded by a round table discussion with participation by the audience.

50 years of Earth observation – What's next?

Conducted as an ISPRS hosted plenary aside UNISPACE 50+ (June 19th, 2018) at the VIC, Vienna, Austria, this event assembled speakers from academia, international organisations, space agencies and NEW SPACE businesses: (Christian Heipke, President ISPRS; Barbara Ryan, Director GEO; Jim Green, Chief Scientist, NASA; Josef Aschbacher, Director Earth Observation, ESA; Mr. Kazuo Tachi, Associate Director General, JAXA; Robbie Schingler, CSO, Planet; Wolfgang Wagner, TU Vienna; Jean-Jacques Tortora, Director ESPI, Vienna).

Panelists at the UNISPACE 50+ ISPRS Space Agency Forum



Moderated by Lena Halounova and Gunter Schreier, the panel ended with a round table discussion, wherein the speakers shared their visions on where

Earth observation is developing and what actions need to be taken to meet the societal demands on fast, reliable and global geo- information. From Space to Place

This International Symposium on the use of Space Technologies for Natural and Cultural sites (Sept. 18-20, 2018 Campeche – Mexico) was – amongst others – also organized under auspices of ISPRS (Conference Organizer: Mario Hernandez). Gunter Schreier, IPAC Chair, was invited to give a keynote on “Earth Observation and the Copernicus Programme in support to Archaeology and World Heritage Preservation”. He also introduced the participants to ISPRS topics.



Participants to the International Symposium on the use of Space Technologies for Natural and Cultural sites

International Cooperation in Earth Observation

IPAC organized this event on November 20th, 2018, aside ISPRS TC V Mid Term Symposium - November 20th, 2018 at the Indian Institute of Remote Sensing, Dehradun.

The presentations and panel discussions with invited speakers reviewed international cooperation in Earth observation missions and Earth observation application projects. Conducted in India, the focus was on cooperative missions between ISRO and international partners.



Final Round Table discussion at the IPAC Session "International Cooperation in Earth Observation"

High level speakers from ISRO, ANTRIX, CNES, NASA and ESA introduced collaborative Earth Observation Missions and application schemes which aim to contribute to the understanding of global change and support the United Nations Sustainable Development Goals (SDG). Next to the wide range of missions conducted and planned by ISRO, joint missions with CNES (Megha-Tropiques, SARAL, Trishna) and NASA (NISAR) have been presented. International programs and organisations such as CEOS, the Space Climate Observatory (SCO), the Asia-Pacific cooperation scheme and Copernicus concluded the presentations. A round table discussion closed the one day event.

Towards Digital Twins of our Earth

This session was organised by IPAC as a Partners Program hosted by ISPRS at the Geospatial World Forum (GWF) in Amsterdam Thursday, 21 October 2021.

It featured three key note speakers from organisations engaged in the European Destination Earth program. This initiative aims to build gradually a "Digital Twin of the Earth" based on Earth observation data from the Copernicus program, other EO missions and geospatial information. Facing the challenges of global climate change, this data- together with large scale computing infrastructure and innovative analysis schemes – could also be used as starting point and frame for modelling complex earth science scenarios to be used for simulating developments and the effects of

potential measures to mitigate global change. Those virtual “digital twins” would improve the understanding of environmental/climate developments and eventually help to forecast changes and extreme events. Key notes included

Liina Munari (European Commission), Peter Bauer (ECMWF) and Nicolaus Hanowski (ESA), The speakers were introduced by Lena Halounova, Secretary General, ISPRS. The follow-up discussion was moderated by Gunter Schreier, IPAC chair.



Earth Observation Forum during the ISPRS Congress in Nice, 2020 - 2022

IPAC was asked to organize an “EuroSDR National Mapping and Cadastral Agency (NMCA) and ISPRS Space Agency (SA) Forum” during the planned ISRS Congress in 2020. The Track 1 Forum was titled: “Mapping the world of tomorrow: Plans and Challenges of Space and Mapping Agencies”.

For EuroSDR Jon Mills and André Streilein have gathered key note speakers from mapping agencies. The Earth observation part was organized by Gunter Schreier and Michael Rast (ESA). Plan was to have 4 sessions followed by a round table discussion over a full day. Speakers from ESA (Josef Aschbacher, now DG ESA), NASA, CNES, IGN, GEO, Planet and others have already confirmed their participation prior to the cancelation of the 2020 congress.

The forum was planned to be revived in the 2021 virtual version of the ISPRS congress. However, EuroSDR, did withdraw from the virtual format. In addition, some of the Space Agency speakers have been no longer in their 2020 position, which would have caused an entire re-design of the sessions. Therefore, this session was skipped to the ISPRS 2022 congress in Nice.

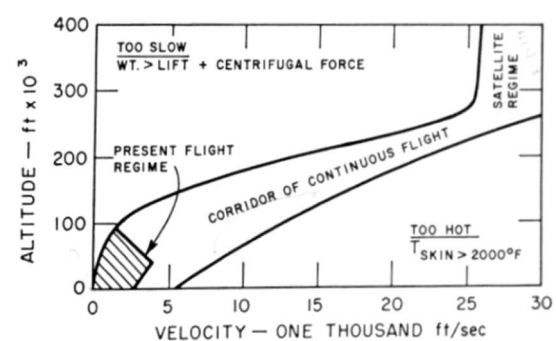
At the time of writing (early Feb 2022), a draft agenda for an “Earth Observation Forum” (EuroSDR has withdrawn from organising a “Mapping Agency” part) has been established and speakers from Space Agencies (CNES, ESA, NASA) and EO industry (Airbus, Planet, Ororotech) have confirmed their participation (depending on Corona-rules). Current remaining task is to coordinate other proposals for forum tracks at the Nice 2020 congress. This coordination is currently done by Laurent Polidori, Ian Dowman and Gunter Schreier.

Activities in Support to Council

Responses to questions from UNOOSA

IPAC supported the ISPRS Council specifically with questions related to legal and international affairs, coming – amongst others – from UNOOSA. In this context, UNOOSA requested ISPRS for information and for an opinion on the “Delineation of outer Space”.

A first request from UNOOSA was on 12 Sept 2017. Frans van der Dunk, IPAC member and professor of space law, responded on 18 Nov 2017 with an elaborate 5 pages response, incl. recommendation to ISPRS council: *“Efforts at increasing adherence to the space treaties, especially the four addressed above in somewhat greater detail, should therefore in general be very much supported by the ISPRS, noting that of course on particular details other concerns may require efforts to amend or otherwise adapt this regime”*



NOTE: SKIN TEMPERATURE ONE FEET AFT OF LEADING EDGE ON FLAT PLATE AT 5° ANGLE OF ATTACK.

Figure 8.2: Variation Versus Altitude for Various Values of Dynamic Pressure and Equilibrium Temperature

Source: Von Kármán 1956, at 141

One particular point was the definition of the delineation of “outer space”. Whilst this is often referred to as the “Karman Line” at 100km, both the heritage from “von Karman” and the use in legal regime leave room for questions and interpretation.

A further request from UNOOSA was tabled on 1 December 2020, about the definition of the delineation of outer space and the character and utilization of the geostationary orbit

Fabio Tronchetti, IPAC member and professor on Space Law, responded on 13. January 2021 & 20. February 2021 to the 12 specific questions by UNOOSA in an 11-page detailed response.

With increasing commercial activities in space borne and very high altitude (e.g. balloon and others) Earth observation, these questions are also of considerable interest for the ISPRS community.

Representation on other international organizations

The IPAC chair is appointed by Council to represent ISPRS in the following international organizations (partly together with other ISPRS representatives):

- UNOOSA, COPOUS: Lena Halounova and Orhan Altan are frequently participating in the yearly UNOOSA Meetings in Vienna. IPAC was supporting requests for information from UNOOSA (see above)
- COSPAR: IPAC Chair participated on behalf ISPRS in the COSPAR (virtual) Council Meeting 28.-29.1.2021
- IAF/IAA: IPAC Chair, Gunter Schreier, is member of the International Astronautical Federation (IAF) Earth Observation Committee and co-chairing EO sessions at the yearly International Astronautical Congress (IAC). Last IAC was conducted in 25– 29 October, 2021 in Dubai. The next one will be 18 – 22 September in Paris.
- CEOS: Committee on Earth Observation Satellites; Members are mostly national space agencies. IPAC chair participated- amongst others – in a recent virtual meeting of the CEOS Working Group on Capacity Building and Data Democracy

Forthcoming conferences with IPAC/ISPRS involvement include:

- GLOC 2022: IAF Global Space Conference on Climate Change, Oslo, Norway. Due to conflicts with the ESA living Planet Conference in 2022 (and the Corona situation), the conference is now postponed to 2023.
- International Symposium on Remote Sensing of the Environment (ISRSE) - 39, Hanoi, hosted by VNSC& VAST. The planning is mastered by International Committee on Remote Sensing of the Environment (ICORSE, a committee affiliated to ISPRS). The Symposium was postponed from 2021 to now 14-18 Nov, 2022; but still to be confirmed by the local organizers.

Recommendations to Council: NEW SPACE Earth Observation mission/constellations

“New Space” is a general notion for the increased presence and performance of commercial companies starting businesses in earth observation missions and downstream data analysis and services. Companies are either newly founded and start-ups or have been created/supported by big industrial players. These New Space companies gain from the considerable amount of financial resources (e.g. venture capital), drive the development of the market and change the way data is analyzed and services are provided (e.g. Big Data, AI, ML). Therewith, New Space has also a considerable influence on the needs for skills and experience developed by science and engineering. New Space has therefore also a considerable influence on ISPRS.

ISPRS council asked IPAC to compile a set of recommendation on how ISPRS should react on New Space and how and where ISPRS need to react, adapt and change.

These recommendations should be tabled to the ISPRS council before the Nice 2022 congress.

Report of the International Scientific Advisory Committee Report (ISAC), Ian Dowman, Chair

Introduction

The International Science Advisory Committee (ISAC) has been active between 2016 and 2022, (the period of office was extended because the 2020 GA was cancelled due to Covid), to advise Council on science issues with the same terms of reference as in the previous four years (2012-2016), and with unchanged membership during the past six years. The committee has responded to Council requests and worked closely with Council on a number of issues. The activities of ISAC are set out below with some comments and recommendations for future action.

Terms of Reference

- Identify and prioritize scientific and technologic (S&T) trends which will impact the S&T activities of the Society and recommend actions to ISPRS Council.
- Facilitate excellence in scientific research and development and the use of proper and appropriate technology by evaluating and refining S&T Resolutions proposed in advance by ISPRS Member Organizations and Commissions for approval by the quadrennial ISPRS General Assembly.
- Collaborate with the ISPRS Council to formulate Resolutions for ISPRS General Assembly approval which will ensure that ISPRS is at the forefront of the S&T in the photogrammetry, remote sensing and spatial information sciences and covers the full breadth of the Society's mission.
- Review proposed Working Groups Terms of Reference with Council and identify S&T gaps and overlaps and recommend corresponding fills and consolidations.
- Evaluate inputs recommended for changing the overall scope and direction of S&T activities in the Society and advise Council accordingly.
- Suggest collaborative S&T activities with other international societies and intergovernmental bodies to foster cooperation on the interdisciplinary boundaries.
- Propose worthy candidates for recognition and awards.

Membership

Dowman, Ian (ISAC chair)	Photogrammetry and Remote Sensing University College London	UK
Cho, Kohei	Photogrammetry and Remote Sensing Tokai University	Japan
Elberink, Sander Oude	Spatial Information Science University of Twente	The Netherlands
Fraser, Clive	Photogrammetry and Remote Sensing University of Melbourne	Australia
Hernandez, Jaime	Remote Sensing University of Chile, Santiago	Chile
Madden, Marguerite	Spatial Information Science University of Georgia	USA
Nayak, Shailesh	Earth Observation Chairman, Indian Space Research Organisation	India
Polidori, Laurent	Photogrammetry and Remote Sensing Centre d'Etudes Spatiales de la Biosphère, Toulouse	France
Sester, Monika	Spatial Information Science Leibniz University, Hannover	Germany

Shan, Jie	Photogrammetry and Remote Sensing Purdue University	USA
Shi, John	Spatial Information Science The Hong Kong Polytechnic University	Hong Kong
Skidmore, Andrew	Remote Sensing ITC, University of Twente	The Netherlands
Smit, Julian	Photogrammetry and Remote Sensing University of Cape Town	South Africa
Vosselman, George	Photogrammetry and Remote Sensing ITC, University of Twente	The Netherlands
Wagner, Wolfgang	Remote Sensing Vienna University of Technology	Austria
Winter, Stefan	Spatial Information Science University of Melbourne	Australia

Activities

Council has requested advice from ISAC on a number of issues and these are listed with a brief summary of the advice given and conclusions.

Proposals for working groups of the Technical Commission Presidents: proposals were examined and commented on.

Publications: Council asked ISAC for advice on how to deal with pre-publication of papers submitted to ISPRS publications and comment on the Council draft. ISAC members generally agreed with the draft guideline.

Restructuring Council: ISAC reviewed proposals to restructure Council and made a number of comments which were taken into account by Council in the revision of the first draft. A number of additional issues were identified which Council might wish to consider in the future.

One issue which has not been addressed is encouraging and enabling individuals from developing countries to serve on Council. Although Council travel is funded, it is common and useful for people to serve as Commission Presidents prior to seeking Council positions and that is where there is a problem with financial support. There can also be a disconnection between qualified individuals and national representation on ISPRS.

Restructuring Commissions: ISAC was asked to review the success of the restructuring of the Technical Commissions which was approved before the 2016 Congress. The restructuring is considered to be successful, however the new structure has not significantly helped communication or involvement with less well financed countries.

Keynote Speaker Programme: ISAC is generally in favour of the proposals for a Keynote Speaker programme with some reservations such as possible problems in evaluating speakers and keeping the list up to date. ISAC made some suggestions to Council. First, Ordinary Members (OdMs) should be able to nominate speakers themselves and second, Council shall ensure that OdMs from developing countries apply. It was also suggested that ISPRS make the list available to non ISPRS members.

Plagiarism: In November 2019 Council asked ISAC to advise on how to implement tests for plagiarism in the Annals and Archives. ISAC made a number of comments, largely based on the experience of members.

Assessment of the Scientific Initiative and Education and Capacity Building Initiatives: this was done by ISAC and provided to Council. There is a separate report on this activity.

Unsolicited Advice

As noted above it was recommended at the Prague Congress ISAC should be more proactive in advising Council on developments which may not have been identified by Council and that ISAC should meet on convenient occasions for discussion of relevant issues.

In July 2017 the chair invited members to raise any issues which they thought to be relevant and particularly to comment on ISPRS strategy in Africa and Latin America. ISAC members have made a number of useful comments. The suggestion made most frequently is that ISPRS should work with other organisations to develop recognition in these areas; AARSE, ICA and GEO were all mentioned.

Areas for collaboration include capacity building, GEO BON (Biodiversity Observation Network) and SDGs. It was also suggested that the Regional Representative structure was not working well. All of these approaches have been tried in the past, clearly without great success. Council has addressed this through changes in the Statutes. On a more individual level it was suggested that people who had received TIF grants could be targeted to become involved with ISPRS.

Comments and Conclusions

The chair of ISAC was appointed chair of the International Science Committee of GSW in Enschede and the Congress in Nice, and served on the Committee to oversee preparation of the Forum

Track in Nice. The role of the chair in these positions has varied significantly in all of these and other events and it considered to be important that the role of ISAC in GSW and Congresses should be made quite clear.

I believe that ISAC has provided a useful role in advising Council and that this should continue; as noted earlier ISAC could be more proactive in searching out areas where Council could benefit from additional advice.

Finally, I note that I have chaired ISAC since 2012 and wish to pass this role on after the Congress in 2022. I thank all members of ISAC for their cooperation and support and Council for good interaction.

Restructuring ISPRS Commissions - ISAC Review

At the Prague Congress in 2016 the decision to establish five Technical Commissions, instead of the previous eight, was implemented. These Commissions are now well established and have held their mid-term symposia. Council would now like to get a preliminary assessment of whether the new arrangements are meeting the objectives for change.

Background to change

The following rationale for changing the commission structure was put forward before the changes were agreed:

- *The geospatial information market has become larger and more interesting to the Information and Communications Technology (ICT) and also to the general public. As a result, our area of interest faces stronger competition from other disciplines.*
- *The number of scientific ISPRS meetings has risen, as has the number of meetings outside ISPRS that are relevant to our community.*
- *Scientific and technical progress has given rise to overlaps in the topics covered by the different ISPRS commissions, resulting in a fragmentation of activities and increasing duplication of effort.*
- *During recent General Assemblies there has been only a limited number of Ordinary members interested in hosting a Technical Commission.*

The overall goal is to better position our society as a relevant, vibrant and forward-looking organisation for the 21st Century.

In line with the ISPRS Strategic Plan, which calls for a concentration of Society efforts on the most important issues of our field, Council suggests examining and re-defining the commission structure. The aims of this re-structuring effort are threefold:

- *To increase the relevance of the society and its work in the global geospatial world in science, government, industry and end user communities;*
- *To concentrate the efforts of the society on the most relevant issues and thus reduce the existing lack of focus in some of our activities*
- *To enhance the attractiveness of hosting a Technical Commission for Ordinary Members and individuals acting as Technical Commission Presidents.*

In order to maximise multi-national participation in ISPRS, we further suggest the formal position of a Vice-Technical Commission President (V-TCP), simultaneously encouraging the V-TCP to originate from an Ordinary Member different to that of the TCP.

An additional possibility to engender involvement of ordinary members not hosting a Technical Commission and scientists in such countries, is the introduction of Regional Meetings, in particular in areas far away from symposia venues. In this way it is anticipated that global participation of all ISPRS members will be enhanced.

The change was agreed by postal vote in 2015 and the following Commissions were established. The figures in brackets indicate the number of bids made for the Commission.

	2012 - 2016 Commissions		2016 - 2020 Commissions
I	Sensors and Platforms for Remote Sensing [1]	I	Sensor systems [2]
		III	Remote Sensing [1]
II	Theory and Concepts of Spatial Information Science [1]	IV	Spatial Information Science [1]
III	Photogrammetric Computer Vision and Image Analysis [1]	II	Photogrammetry [2]
IV	Geospatial Databases and Location Based Services [1]		
V	Close-Range Imaging, Analysis and Applications [1]		
VI	Education, Technology Transfer and Capacity Development [1]	V	Education and Outreach [2]
VII	Thematic Processing, Modeling and Analysis of Remotely Sensed Data [2]		
VIII	Remote Sensing Applications and Policies [1]		

The Commission terms of reference can be found on the ISPRS website.

Current position

The statistics for the 2018 and 2014 TC Symposia are as follows:

TC	Held by TCP/V-TPC	No. of participant s.	No. of countries represented	No. of Annals/ Archives papers, submitted	No. of Annals/ Archives papers, published	No. of exhibitors	No. of TIF travel grants
I	Germany/ Brazil	170	28	36/85	22/70	3	7
II	Italy/Japan	410	37	44/217	41/172	12	5
III	China/ Canada	763	52	72/655	43/467	12	8
IV	Netherlands / Canada	252 + > 50day reg.	30	46/153	34/108		9
V	India	374 + 66 at tutorial	17	445	66/144	18	10
Sum					206/961	45	39
TC	Held by	No. of part- icipants	No. of countries represented	No. of Annals/ Archives papers, submitted	No. of Annals/ Archives papers, published	No. of exhibitors	No. of TIF travel grants
I	USA	480	25	82/20	10/62		3
II	Canada	150	24		13/38	8	
III	Switzerland	200		48/62	27/66		

IV	China	320	17	129	15/68		2
V	Italy	280			52/114	9	7
VI	China	300	22		3/24		5
VII	Turkey	81	21	64	13/36		2
VIII	India	450	18		28/336		
Sum					161/744	17	19

It is difficult to make a comparison between these two tables because there is no direct link between the topics covered and regional influences affect the number of attendees but three conclusions can be reached:

- More papers were published in 2018 than in 2014;
- More exhibitors attended the symposia.
- There were more bids for each Commission in 2016 and taking into account the position of V-TCP, more countries were involved. Although no new countries bid for Commissions.

So, it can be concluded that the 2018 symposia were more popular to academics seeking to publish and to commercial companies and there is a small increase in the wish to run Commissions.

In order to make a further assessment from personal experiences, ISAC members are asked to complete a short questionnaire.

Comments from ISAC

This was a difficult brief to respond to because few members of ISAC attended the symposia or had much contact with the Commissions. Those who had attended symposia were asked to fill in a questionnaire to summarise their impressions and others were asked for general comments. Only 7 members responded and of those, 4 had attended symposia.

This report includes a summary of all comments and the individual comments in full, including significant comments from the questionnaire. The results of the questionnaire are summarised in a table.

The results are fairly subjective but can be summarised as follows:

- More papers were published in 2018 than in 2014.
- More exhibitors attended the 2018 symposia.
- The 2018 symposia were more popular with academics seeking to publish and with exhibitors.
- The current structure is effective and better than the previous structure.
- The Commission symposia were well organised and covered the fields of ISPRS activities.
- There was no significant overlap between symposia except for TC V.
- The role of TC V needs to be reviewed; in 2018 there was insufficient focus on education and outreach.
- The effect of having a V-TCP was not much in evidence except for TC II.
- The new structure has not significantly helped communication or involvement with less well financed countries.

There is a strong feeling that ISPRS is offering an efficient suite of meetings, taking the symposia with the Geospatial Week and WG meetings.

May 2019

An Assessment of the Scientific Initiative and Education and Capacity Building Initiatives

A report on a study carried out by ISAC

Introduction

The ISPRS Science Advisory Committee (ISAC) was asked by Council to carry out an independent evaluation of the ISPRS Scientific Initiatives (SI) and Education and Capacity Building Initiatives (ECBI). ISPRS has launched and financed rounds of SI in 2014, 2015, 2017, 2019 and 2021 and rounds of ECBI in 2018 and 2020. The brief to ISAC was to report on how many papers were published from

these projects, what were other outcomes from them, how many citations of the outcomes of the initiatives can be found, which projects were more successful, and any other factors of interest.

In order to make the project feasible in a reasonable length of time with the manpower available it was decided to limit the evaluation to the most recent four years for which reports were available, this

meant that 20 projects from 2017, (SI). 2018, (ECBI) and 2019, (SI) were assessed.

This report summarises the procedures and guidelines for applying and conducting projects, describes the methodology used in the evaluation, summarises the conclusions and makes recommendations for future projects.

Background

The guidelines for SI and ECBI are set out in the Orange Book

<https://www.isprs.org/documents/orangebook.aspx> appendices 9A and 9B.

Methodology of the assessment

Documentation

Reports submitted to ISPRS from all projects were available on the ISPRS website and in addition to these, all PIs were asked to provide additional information as follows:

1. A list on any papers and citations which have arisen from your project since it was completed.
2. Details of any activities which have resulted from your project, for example funded research, new courses or curricula.
3. An assessment of how the project has benefitted ISPRS, the geospatial community or society in general.

The information provided by the PIs is in the appendix of the full report, this information has been edited to include only the required information. All PIs except one provided the requested information.

The number of papers from each project is included in the annex of the full report. The information from questions 2. and 3. was reviewed by members of ISAC and summarised below.

Evaluation

The reports from the ISPRS website and the returns from the PIs were used by 14 members of ISAC to evaluate the projects. All projects were reviewed by 2 people who were given the following brief:

This assessment is intended to evaluate the overall effectiveness of the initiative scheme and whether it is good value for ISPRS. It is not meant to be a judgment on the performance of each project and the report presented to the GA will not criticise any particular project although any specific criticism may be passed on to Council in confidence. The report may give examples of best practice. Please

answer the following specific questions and add any comments which you have.

1. *Was the project completed successfully?*
2. *If not give the reasons for non-completion and provide comment.*
3. *Was the project effectively publicised and the results published widely?*
4. *Assess the usefulness of the project within the ISPRS community.*
5. *Assess the usefulness of the project to other organisations and groups.*
6. *Give any general comments on the project and any recommendations which could be applied to future initiatives.*
7. *Would you recommend this project as an example of good practice?*

The responses from the ISAC members were collated and analysed by the chair and are presented as follows:

1. A summary of conclusions
2. Recommendations
3. Breakdown of comments by project (Annex).

Summary of comments

The number of published papers from the projects varied considerably. The average for all projects was 3.6 with a range from 0 to 9. Reporting on citations was inconsistent between projects and the 2019 projects have as yet had less chance to publish reports and be cited. Several PIs reported that the preparation and presentation of papers to conferences has been affected by Covid and that additional papers had been written but not yet published. Many of the papers have been published in ISPRS Archives and Annals but a number have appeared in other journals such as those of the IEEE Geoscience and Remote Sensing Society.

An analysis of the returns from the PIs to question 3 reveals a number of common factors:

- Any datasets which were created have been widely used, especially for teaching, this has increased the visibility of ISPRS.
- The projects have generated workshops and tutorials which have also benefitted the visibility of ISPRS.
- The participants in the projects have benefited.

The responses from ISAC members to questions 1, 3 and 4 were overwhelmingly positive with some useful comments indicating good practice and

lessons learned for future projects. Responses to question 5 were also positive although the number of other organisations actually involved in projects was limited. It is noted that the quality of reporting and promotion of the results varies as does access to the data used and the results. The general comments are discussed below and also included in the annex of the full report. Of the 20 projects assessed, 12 were considered to be completely successful and 5 successful with minor reservations. Three were not considered to be satisfactorily completed.

There is no clear difference between the quality of SI and ECBI but it is clear that a strong definition of targets helps to obtain a successful outcome and that projects involving a number of organisations, for example with more than one ISPRS working group and including other international organisations, also work well. It is also clear that projects which include workshops work well and that projects involving preparation of teaching materials benefit from student workshops.

Those projects which are considered to be unsuccessful suffered from being too specific in their scope, were not fully integrated with local conditions or did not initially properly assess the resources of time and man power required.

Relating these assessments to the aims of SI and ECBI set out in the Orange Book, we conclude that the projects improve the international status of ISPRS, benefit ISPRS members and strengthen the Society's educational activities. Overall it can be concluded that SI and ECBI have been successful.

Recommendations

Overall recommendation

- To make results free and openly available where possible.
- Maintain a register of grant recipients and evaluated status of the project.

Recommendations for proposals

- Well defined targets needed.

- A model project proposal would emphasise the key benefits which ISPRS expects.
- Council to ensure that projects are suited to local conditions and that appropriate lines of communication are in place.

Recommendations for execution

- Include workshops in the project and invite other interested parties.
- Education projects should work with teaching organisations.
- For workshops with a training element, provide material suitable for a wide range of understanding and expertise.....
- ... and develop pre-planned advanced exercises for those who finish early or desire additional information.

Recommendations for outreach

- Revise guidelines to ensure that data collected is available on the ISPRS website and fully publicised to non ISPRS organisations including commercial and government bodies.
- Establish a central register on ISPRS website.
- Give clear requirements for reporting and access to datasets e.g. on ISPRS website.
- Project websites should be available for a specified period, e.g. 5 years.
- Report any problems identified with software during the projects to developers.

Conclusions

This assessment has taken a comprehensive look at 20 SI and ECBI projects and concludes that the programme is working well and provides good value to ISPRS and those involved in working groups and Technical Commissions. The programme should continue and a number of recommendations are made to improve the effectiveness of the projects, particularly in promoting the findings and use of the project data to non-ISPRS individuals and organisations.

Report of the International Committee on Remote Sensing of Environment (ICORSE)

Mary Ann Kutny, Chair

The International Committee on Remote Sensing of Environment (ICORSE) is a standing Subcommittee of ISPRS. ICORSE membership is composed of representatives from national and international organizations that actively develop, operate, and utilize remote sensing techniques and Earth observation capabilities. The ICORSE primary goal is to advance the use and application of remote sensing to address priority issues of the environment including scientific and technical, as well as policy and management. A key objective of ICORSE is to provide guidance to the biennial International Symposium on Remote Sensing of Environment, (ISRSE).

ICORSE UPDATE

Following ISRSE-38, held in Baltimore, Maryland, USA in October 2019, chairmanship of ICORSE transitioned from Prof. Guo Huadong of the Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences to Ms. Yana Gevorgyan (2020), and Ms. Mary Ann Kutny, Deputy Director, International and Interagency Affairs Division, U.S. National Oceanic and Atmospheric Administration (NOAA) Satellite and Information Service (2021).

It was not long after the October 2019 ICORSE meeting that we were faced with the global coronavirus pandemic. At that time, like many others, we assumed that it would be relatively short-lived, and went ahead making arrangements for ISRSE-39. The ICORSE met in April and November 2020 where plans were made with the Vietnam Academy of Science and Technology (VAST) and the Vietnam National Space Center (VNSC) to host ISRSE-39 in Hanoi, Vietnam in October 2021. Co-Chairs from ICORSE and VNSC

were selected for both Organizing and Program Committees, where a suite of themes, largely aligned with the U.N. Global Sustainable Development Goals (SDGs), was selected.

As we entered 2021, clearly recognizing the pandemic was not going to be short-lived, ICORSE took the decision to postpone ISRSE-39 from October 2021 to November 2022, still to be held in Hanoi, Vietnam. The ICORSE met, again virtually, in July 2021 to meet and hear from Ms. Mary Ann Kutny, the incoming Chair, to discuss the themes and working groups for ISRSE-39, and to thank ICORSE Members for their continued support of the Committee, and the applications-focused Symposium.

It will come as no surprise that discussions are ongoing with VNSC regarding the timing for ISRSE-39. While it is currently scheduled for 14-18 November 2022 in Hanoi, few would have expected that we would still be dealing with new infections and the impacts from the global pandemic. Travel restrictions are still impacting international travel, which may result in yet another postponement of ISRSE-39. We anticipate making a final decision by mid-April 2022.

Regardless of the ultimate decision on ISRSE-39, I would like to thank ISPRS, and each of the ICORSE Members for their continued support. The role Earth observations and remote sensing play in addressing the challenges of climate change, sustainable development, and yes, even the coronavirus should not be underestimated. The world is, indeed, a safer and healthier place given the daily contributions of ICORSE Members and Partners. Thank you.

Report of the International Committee for Documentation of Cultural Heritage (CIPA)

Stratos Stylianidis, President

General

CIPA Heritage Documentation is a dynamic international organization that has twin responsibilities: keeping up with technology progress regarding documentation of Cultural Heritage and ensuring its usefulness for cultural heritage conservation, education and dissemination. This dual role is exhibited in our parent organizations: *ICOMOS* (International Council of Monuments and Sites) and *ISPRS* (International Society for Photogrammetry and Remote Sensing).

We try to accomplish these two, sometimes conflicting goals, in a variety of ways, through:

- encouraging and promoting the development of principles and good practices for recording, documentation, and information management of cultural heritage.
- leading and participating in international training programs for conservation.
- advising government bodies, regional authorities, non-profit groups and institutions on tools, technology, and methods for using technology.
- sponsoring an international network of professionals in both the fields of technology and cultural heritage for scientific research but also applied practical experience.
- providing a platform with bi-annual congresses for the exchange of ideas, best practices as well as scientific research papers.

Executive Board Activities

In 2019, CIPA held its annual meeting in Avila during the 27th International Symposium. In 2021, our annual meeting took place on a hybrid mode due to the COVID-19 pandemic. For the first time in the history of CIPA, the 28th International Symposium also took place in a hybrid mode; it was scheduled to take place in Beijing. In Avila, for the first time, we implemented our updated Statutes (approved by both ISPRS and ICOMOS) which introduced a new voting system by the CIPA Expert Members and a

new Executive Board, was elected. In addition, three Scientific Commissions⁴ were established and started to contribute to the work of our Commission. The Board held several meetings and discussed internal business. CIPA Emerging Professionals a dynamic group of younger members was initiated for the first time. When necessary, EB has its meeting through teleconference. During 2020, CIPA faced the loss of its former President Cliff Ogleby and its former EB member Gabrielle Fangi.

Organized and Co-organized Events in 2018-2021

During the last 4 years CIPA organized and/or embarked on several events/activities, the majority of which is shown below:

- CIPA Thesis Competition Award, 2018
- International Conference on Cultural Heritage, Tehran Iran and organization of a Workshop on Heritage documentation, March 2018
- 27th CIPA International Symposium, Avila, Spain, September 2019
- Organization of the “Photogrammetry Field School” in Manila, Philippines in cooperation with the Philippines ICOMOS, September 2019
- CIPA workshop “Research and Education in Urban History in the Age of Digital Libraries”, 2019
- 2nd International Conference on “Geomatics and Restoration” - GEORES 2019
- CIPA Spanish Webinar⁵, November 2020
- 28th CIPA International Symposium, Beijing, China, August-September 2021 (hybrid)
- Co-organization of the 2nd International Conference TMM-CH in Athens, December 2021
- Transformational Impacts of Information Technology⁶, OurWorldHeritage Initiative, 2021
- Themes 2021 Debate 9th ARQUEOLÓGICA 2.0 & 3rd GEORES 2021, April 2021

¹https://www.cipaheritagedocumentation.org/about/task_groups/

²<https://www.youtube.com/watch?v=c-rMzQSWmlc>

³<https://ourworldheritage.org/information-technology/>

⁴https://www.cipaheritagedocumentation.org/about/task_groups/

⁵<https://www.youtube.com/watch?v=c-rMzQSWmlc>

⁶<https://ourworldheritage.org/information-technology/>

- Celebration of the IDMS – International Day for Monuments and Sites 2021

Recent Media and Publication information

CIPA redesigned its logo

CIPA website has been reset and moved to a new address⁷

CIPA is active on various social media, e.g., Facebook⁸ and Twitter⁹

CIPA Newsletter appears every four months since 2014 and it continues up to now

The proceedings of the CIPA 2019 Symposium in Avila published as ISPRS Archives¹⁰ and Annals¹¹

CIPA – Heritage Documentation 50 years: Looking backwards¹², published as ISPRS Archives

The proceedings of the CIPA 2021 Symposium (in Beijing) published as ISPRS Archives¹³ and Annals¹⁴

Supporting the publication “Reviving Palmyra in Multiple Dimensions: Images, Ruins and Cultural Memory¹⁵” [Minna Silver, Gabriele Fangi, Ahmet Denker], Whittles Publishing, 2018.

Partners - Members

CIPA is cooperating both with ISPRS and ICOMOS and it is defined by the CIPA Statutes. The Statutes have been approved by CIPA, ICOMOS and ISPRS and they are in force from 27th January 2019. CIPA has the status of a permanent ISPRS Committee as well as of an International Scientific ICOMOS Committee. CIPA is always striving to attract Sustaining Members to support its activities. Currently, CIPA has already 9 Sustaining Members, while CIPA Expert and Regular members are published in our website. Membership is free for the time being.

⁷<https://www.cipaheritagedocumentation.org>

⁸<https://www.facebook.com/cipaheritage>

⁹@CIPAHeritageDoc

¹⁰<https://www.int-arch-photogramm-remote-sens-spatial-inf-sci.net/XLII-2-W15/>

¹¹<https://www.isprs-ann-photogramm-remote-sens-spatial-inf-sci.net/IV-2-W6/>

¹²<https://www.cipaheritagedocumentation.org/wp-content/uploads/2020/02/isprs-archives-XLII-2-W14-1-2019.pdf>

¹³<https://www.int-arch-photogramm-remote-sens-spatial-inf-sci.net/XLVI-M-1-2021/>

¹⁴<https://www.isprs-ann-photogramm-remote-sens-spatial-inf-sci.net/VIII-M-1-2021/>

¹⁵https://www.whittlespublishing.com/Reviving_Palmyra_in_Multiple_Dimensions

Report of the African Regional Representative, Hussein Farah

The major activities were attending ISPRS events, workshops and conferences that support the objectives of ISPRS. The details of the activities are as follows:

Africa Association of Remote Sensing Conference - AARSE Conference 2016

The African Association of Remote Sensing of Environment (AARSE) was held in Kampala, Uganda from 24th to 28th October 2016. The AARSE2016 conference theme was *"Our Earth, our Heritage: Harnessing Geospatial Technology for Sustainable Development in Africa"*. This event is a premier forum in the African continent, bringing together leading scholars from the remote sensing and related communities from Africa and around the world. The ISPRS Regional representative for Africa attended the conference and promoted the objectives and activities of ISPRS and took part in special sessions on land cover mapping, food security, water resources management and AfriGEOSS.

Training on applications of SAR - 2016

The Regional Centre for Mapping of Resources for Development, together with its partners, organized two training events on the use of SAR data and its applications in environmental monitoring and food security in Kenya and Rwanda.

The Kenya event was held at Kenyatta University, Kenya from 29th to 30th September 2016. The Rwanda event was held from 3rd to 4th October 2016 at National University of Rwanda and 6th and 7th October at INES Ruhengri University, Rwanda.

1st AfriGEOSS Symposium - 2016

The first AfriGEOSS Symposium was held in Victoria Falls, Zimbabwe from 27th to 29th April, 2016. The AfriGEOSS initiative has the objective to strengthen the link between the current GEO activities with existing capabilities and initiatives in Africa and provide the necessary framework for countries and organizations to access and leverage ongoing bilateral and multilateral Earth Observation-based initiatives across Africa. The symposium's theme was *"Earth Observations for the Africa We Want"* and discussions focussed on objectives such as the African Union (AU) Agenda 2063 with the objectives of understanding the role of Earth Observations in the implementation of African policies for sustainable development; Identifying ways of mainstreaming Earth Observations in the decision making process in Africa; and building synergies

with GEO initiatives and international initiatives relevant to Africa with continental initiatives.

Global Land Cover and Bamboo Mapping Workshop - 2017

Global Land Cover Mapping Workshop with emphasize on bamboo mapping was held in Nairobi from 13th to 14th January 2017. The training was organized by the International Network for Bamboo and Rattan and Tsinghua University of China. Participants were introduced to the Global Land Cover Mapping and Bamboo mapping efforts. The ISPRS Regional Representative for Africa attended the conference and promoted the objectives and activities of ISPRS.

37th International Symposium on Remote Sensing of Environment (ISRSE-37) - 2017

The Symposium was held in Tshwane, South Africa from 8th to 12th May 2017. The theme was *"Earth Observation for Development and Adaptation to a Changing World."* ISRSE is convened on a biennial basis by the International Centre on Remote Sensing of Environment (ICRSE) and the International Committee on Remote Sensing of the Environment (ICORSE), a standing committee of the International Society of Photogrammetry and Remote Sensing (ISPRS). The symposium was opened by Minister of Science and Technology of South Africa, who shared the significance of symposium to the African communities for the collaborative opportunities they offer with the international partners. ISPRS representative John Trinder spoke at the opening session with a message of goodwill from ISPRS.

ISPRS Capacity Building for High-Resolution Land Cover Inter-comparison and Validation Workshops - 2018

The project "Capacity Building for High-Resolution Land Cover Inter-comparison and Validation", involving ISPRS WG IV/4, was one of the ISPRS Education and Capacity Building Initiatives 2018. The project aimed at developing educational material on the inter-comparison and validation of global Land Cover (LC) maps to address a variety of societal needs including the United Nation's Sustainable Development Goals (SDGs). Two workshops were held: the first on September 1, 2018, at the World Bank in Dar es Salaam, Tanzania and the second on September 3, 2018, at the Regional Centre for Mapping of Resources for Development (RCMRD) in Nairobi, Kenya. The two workshops, run by representatives of the project's

Principal Investigators - Politecnico di Milano (Italy) and the National Geomatics Center of China (China) - were attended by a total of 60 people from 8 African countries.

Free Open Source for Geospatial (FOSS4G) 2018 Conference

The conference was held in Dar es Salaam, Tanzania, in August 2018. The Theme was 'Leave No-One Behind.' The conference show-cased geo and open data projects across Africa and the world which included: growth of OpenStreetMap communities and innovative ways of data collection using mobile phones to drones, Open Cities Africa – making cities resilient through open data and participatory mapping, Ramani Huria - community-based mapping project in Dar es Salaam creating highly accurate open data on flood prone areas using Open Street Map. The conference was attended by 1,135 delegates 71% being from Africa.

Summer School in Botswana - 2018

ISPRS in collaboration with the Regional Centre for Mapping of Resources for Development (RCMRD) and other partners in Botswana organized four days training event in Gaborone Botswana from 24th to 28th September 2018. The Other partners were University of Botswana and Surveys and Mapping Department. The training targeted university students and young researchers to further develop and enhance EO data processing skills they learnt at tertiary institutions. Fifty-four (54) participants took part in the training. The following outcomes were achieved : Increased capability to pre-process and analyze remote sensed earth observation data; Use open source tools in analysis of spatial data and remote sensing data and building of institutional linkages of participating institutions and inter-personal networks amongst participants and peers.

Joint 4th AfriGEOSS Symposium and 3rd RCMRD International Conference - 2019

The fourth AfriGEOSS Symposium and the third Regional Centre for Mapping of Resources for Development (RCMRD) International Conference was held jointly from 13th to 16th August, 2019 in Nairobi, Kenya. The objective of the Conference was to spur exchange of ideas on fast-tracking application of earth observation and geospatial technologies in development decision making. The theme was *Earth Observation for Evidence Based Decision Making*. More than 200 scientists, researchers and government officials attended the conference. The ISPRS African Regional Representative attended and gave a good will message from ISPRS.

Africa Association of Remote Sensing Conference - AARSE - 2018

The conference was held in Alexandria Egypt from 25th to 29th October 2018. It was organized by the African Association of Remote Sensing of the Environment (AARSE) in partnership with the [National Authority for Remote Sensing & Space Sciences \(NARSS\)](#). The Theme was Earth Observations and Geospatial Science in service of Sustainable Development Goals. The Conference was attended by the ISPRS President where he was honoured for his outstanding contribution to Earth Observation in Africa.

Summer School in Uganda – July 2019

The summer school took place on 22nd to 24th July 2019, at the GIS Center of the College of Engineering, Design, Art and Technology, Makerere University, Kampala, Uganda. The summer school was attended by 25 participants from different institutions in Uganda. It was facilitated by Prof Mahdi Motagh, from Leibniz University Germany, who gave a series of lectures on the use and acquisition of SAR data.

AfricaGIS 2019 and 2021

AfricaGIS 2019 conference was held from 18th to 22nd November 2019 in Kigali, Rwanda. Organized by EIS-Africa and the University of Rwanda, the conference explored the role of innovations in geospatial information and its implication in addressing the 17 SDGs targets for an inclusive, prosperous and sustainable African continent. The conference which attracted about 500 participants and contributes to the development of skills and institutional capacity across the continent.

AfricaGIS 2021 physical in-person conference was held from 22nd to 26th November 2021, in Abidjan, Ivory Coast. The theme of the conference was *geospatial innovation and science for Africa's growth and sustainable development*. About 300 participants attended the conference. The conference featured keynote speeches by leading scholars, technical sessions with reports of the latest research outcomes. In addition, there were poster presentations and exhibitions.

4th RCMRD International Conference 2021

The conference was held virtually from 17th to 19th August 2021, with the theme *"Reflecting on Resilience: Mapping challenges and Solutions for a Better World"*. The conference discussed formulating ideas toward the utilization of earth observation and geospatial technology in development and decision-making with focus on agriculture and food security, weather and climate,

water and water-related disasters and natural resources management. Being among the first international virtual conferences held in Africa, it was very successful attracting about 1,000 participants from all over the world. It also attracted

many virtual exhibitors including AfriGEOSS, Alliance for a Green Revolution in Africa (AGRA), GMES and Africa, East Africa Forest Observatory and SERVIR Africa.

Report of the Asian Regional Representative, Shailesh Nayak

The Asian Association of Remote Sensing has been actively engaged in promotion of geospatial technologies and applications in Asia. AARS is consisted of 18 Ordinary Members, 8 Associate Members, and 13 Sustaining Members. ISPRS is an Associated Member and strong supporter of AARS and Asian Conference on Remote Sensing (ACRS).

The 41st Asian Conference on Remote Sensing (ACRS) was held from 9 to 11 November, 2020 in Deqing, China. The conference was jointly organized by the Asian Association on Remote Sensing (AARS) and the Chinese National Committee for Remote Sensing (CNCRS) in Deqing, China during November 2-6, 2020. Considering the serious situation of COVID-19, the conference was organized online connecting the conference place with the international community. Over 800 participants from 44 countries presented 248 papers at the conference. It was the first ACRS organized online in the 41 years history of ACRS. Usually, ACRS is organized for five days. However, considering the online conference situation, the conference was reduced to three days, and usual technical sessions were organized on second day with ten sessions running in parallel. To reduce the no show, the speakers were requested to provide presentation video in advance. One of the uniqueness of ACRS is organising Satellite Program Session which is being attended mainly by Space Agencies and industries from Asian region.

The 42nd ACRS was held at the Can Tho University, Can Tho, Vietnam from November 22 to 24, 2021. The conference was jointly organized by AARS and Can Tho University. Considering the continuous situation of coronavirus epidemic, the conference was organized online. 300 delegates presented 205 papers related to remote sensing, spatial sciences and environment. The interest to AI, Big data, and micro satellites is increasing. 11 agencies and companies participated in the online exhibition. The Satellite Program Session was organised with 8 space agencies including industry participated in the session.

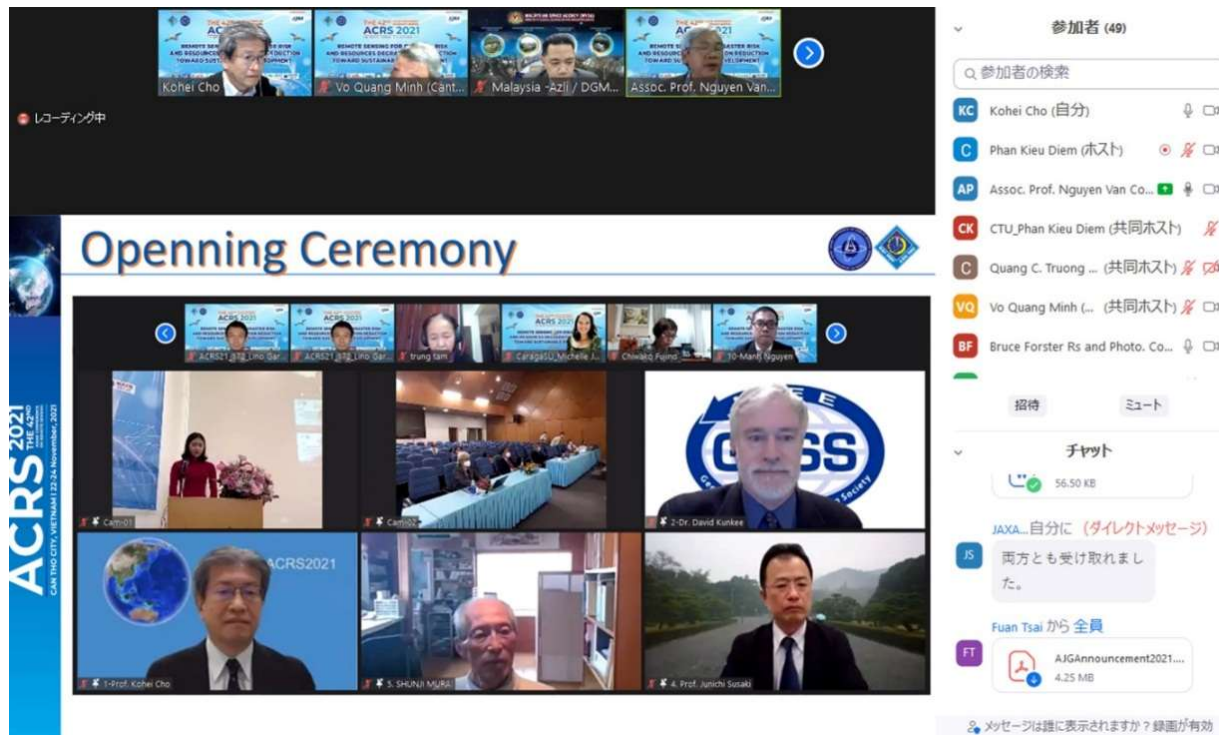
The Centre for Space Science Technology Education in Asia and the Pacific (CSSTEAP), Dehradun, India regularly conducts Post Graduate (PG) courses (nine months) and short courses (2-4 weeks) related to space science and technology. During the year 2020 and 2021, due to worldwide COVID-19 pandemic, the PG courses planned physically for year 2020 were conducted through online mode in year 2021. The three ongoing and online PG courses are 25th PG

course in Remote Sensing & Geographic Information System (18 participants from 11 countries), Satellite Meteorology & Global Climate (10 participants from 06 countries) and Space and Atmospheric Sciences (15 participants from 06 countries). During 2020-2021, a total 473 participants from 26 countries got benefitted from 10 online short courses in RS&GIS Technology, Meteorological Satellites, Atmospheric Science, Forest Monitoring and Assessment, Disaster Management, Weather and Climate Studies, Coastal Zone management, Small Satellite Mission, Satellite Navigation etc. A two-day special online course jointly organized with UNOOSA ESA-ISRO-NASA was organised on Remote Sensing Applications for Crop Mapping and Monitoring (64 participants from 20 countries) on October 5 and 7, 2021.

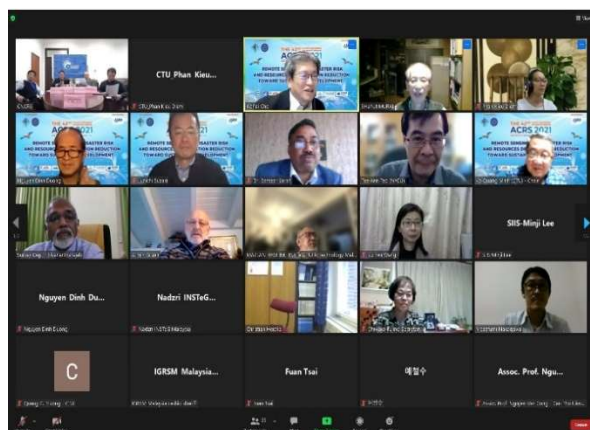
To increase the outreach through virtual mode, CSSTEAP and UNOOSA designed and developed the first MOOC on 'Geospatial Applications for Disaster Risk Management' so as to reach large number of participants enabling flexible online education. The Phase-I MOOC received huge response and based on the feedback received on the Phase-I of MOOC organized during 2020 and request to continue the MOOC, CSSTEAP had launched Phase II of MOOC on June 01, 2021 which continued until November 30, 2021. About 7049 participants from 128 countries across the globe have attended the Phase II of MOOC. CSSTEAP also supported to UN activities in the Regional workshop on "Enhancing Preparedness for Climate Related Disasters Using Space-Based Technologies" for SAARC Countries on 17th February 2021.

Besides these training activities, CSSTEAP has taken up new research initiatives in support of UniSpace+50 Thematic Priority 7 on Capacity Building for the 21st Century. Outcome of these are:

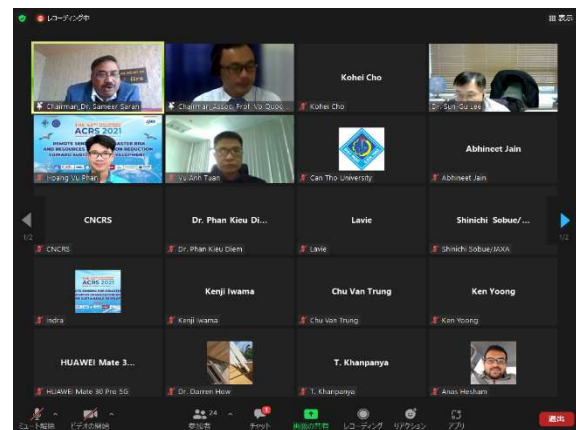
- 1) A conceptual framework for coordinated capacity development was evolved to maximize the contributions of Geospatial technologies in support of implementing Global Sustainable Development Agendas.
- 2) A detailed study from the Centre's 25 years database could help understand the women priorities in uptake of Geo-informatics disciplines and their challenges faced in developing Asian region countries, and to suggest possible solutions to support their career building in Geospatial technologies.



Opening Ceremony of ACRS 2021 in Online Mode



AARS General Conference during ACRS 2021



(b) Satellite Program Session

Report of the Latin American Regional Representative, Mario Hernandez

This report describes the current situation and suggests a roadmap for ISPRS in Latin America

Latin America is a geo-diverse continent, home of several terrestrial biodiversity hot spots. With a wide range of ecosystems varying from high mountains, desert, tropical rainforest, grasslands, etc. Such ecosystems are vulnerable to extreme climate change events. Land use is another driver that modifies land cover on this region. The interaction of land-use change with climate change on the land cover is not well understood in Latin America. All these issues are producing an intense use of satellite remote sensing research and technologies. Unfortunately, current efforts are done in isolation and there is no academic body that brings all these expertise together.

The worldwide pandemic: The region is not yet organized as far as a well-established regional association of Remote Sensing and/or Photogrammetry experts. As a consequence, in order to organize ISPRS related events, we need to organize such events through universities and/or through the ISPRS presence at regional events (e.g. SELPER, LARS). The different lockdowns in Latin America had, as a consequence, that no RS or Photogrammetry events could take place.

Complex political situation: Our two major RS-space-research-institutions INPE and CONAE, faced a complex national situation. The deforestation results obtained by INPE were rejected by the Government. Argentina, passing through an extremely complex economic situation, is being forced to cut budgets all over the country.

GRSS & ISPRS Latin American Remote Sensing Conference (LAGIRS)

During this period, our strategic objective as ISPRS has been to set up a scientific forum for the exchange of RS and Photogrammetry in the region. The first LAGIRS conference was planned for March 22-26, 2020 being co-organized jointly with University of Chile, Dr. H. Jaime Hernández Palma. The pandemic forced us to cancel.

Taking advantage of the work already done to prepare LAGIRS (124 papers were selected), we decided to publish selected papers:

<https://ieeexplore.ieee.org/xpl/conhome/9162082/proceeding>

Brazil has indicated interest in hosting the next edition of LAGIRS (through Raul Feitosa from the Pontifical Catholic University of Rio de Janeiro). Our plan is to have it in 2023 in Brazil.

ISPRS and SELPER (Society of Remote Sensing Experts of Latin America)

SELPER organizes each year a regional get-together. Slowly the importance of SELPER has been decreasing. SELPER, conscious about the need for a change is redefining their overall strategy. In this sense we as ISPRS have offered that LAGIRS could become the scientific get-together of Latin America and that ideally would be to organize LAGIRS as a joint event SELPER, ISPRS and GRSS.

New opportunities for ISPRS emerging in Latin America

A regional space Agency: In October 2020, Mexico and Argentina agreed to lead the creation of ALCE (Agencia America Latina Caribe Espacio), a regional space agency that will seek to unite resources, have a common budget, common human resources and technological expertise. Bolivia, Ecuador, El Salvador, and Paraguay have indicated their intention to join. In addition, Colombia and Peru have indicated their will to be part of the group, not yet as active members but as observers.

In April 2022, Mario Hernandez will meet with the Mexican Space agency to discuss an eventual partnership between ALCE and ISPRS, suggesting for example jointly co-organizing, from time to time, a Geo-spatial week for Latin America.

The International Science Council (ISC) announced in February 2022 the establishment of a Latin American Regional Focal Point. Such a regional office will be hosted by the Colombian Academy of Exact, Physical and Natural Sciences. Soon ISC will make a call for regional experts willing to become members of the Liaison Committee for this Regional Office. Mario Hernandez will apply in order to see if in such way we can assist this Regional Office in Latin America in organizing joint events with ISPRS.

Report of the Regional Coordinator for the Arab States, Abdalla Alobeid, Vice Regional Coordinator

It is a great honor for me as ISPRS Vice Regional Coordinator for the Arab States to be working with ISPRS Council to strengthening of ties between the society and the Arab world and it is certain that the already very good relations with the region will

further improve by increasing scientific activity by holding joint international conference and workshops in cooperation with ISPRS in Arab countries. Our activities cover the following Arab countries:

#	Country	Ordinary Member	Category	Associate Member	Sustaining Member	Regional Member
1	Saudi Arabia	✓	4	✓	×	×
2	United Arab Emirates	✓	6	×	✓	×
3	Jordan	✓	4	×	×	×
4	Morocco	✓	3	✓	×	×
5	Syria	✓	3	×	×	×
6	Algeria	✓	3	×	×	✓
7	Egypt	✓	2	×	×	×
8	Kuwait	✓	2	×	×	×
9	Qatar	✓	6	×	×	×
10	Oman	✓	1	×	×	×
11	Iraq	✓	1	×	×	×
12	Libya	✓	1	×	×	×
13	Palestine	×	-	×	✓	×
14	Tunisia	×	-	×	×	✓
15	Bahrain	×	-	×	×	×
16	Comoros	×	-	×	×	×
17	Djibouti	×	-	×	×	×
18	Lebanon	×	-	×	×	×
19	Mauritania	×	-	×	×	×
20	Somalia	×	-	×	×	×
21	Sudan	×	-	×	×	×
22	Yemen	×	-	×	×	×
		✓: we have activity & ×: we don't have activity				

We are trying to contact with the official authorities to determine the official representative in ISPRS in all the countries that we don't have any activity with ISPRS

Since the appointment of the first ISPRS Regional Coordinator for the Arab States on Feb. 24 2017, we have spent considerable effort to resolve some issues in the Arab world, where we can report some success:

- efforts to bring back activity of some members who stopped their contribution in the society such as Saudi Arabia, Tunisia, Qatar

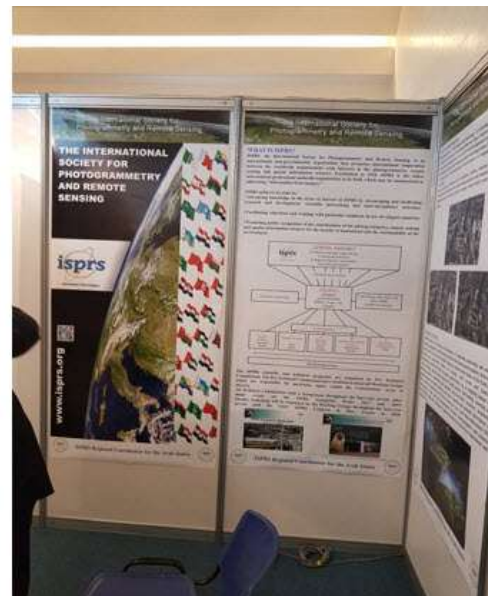
- communication with Dubai Municipality with regard to the organization of Geospatial Week 2019
- A visit to Dubai Municipality to discuss about the delay in signing the contract with ISPRS with regard to hosting Geospatial Week 2019
- Participation in many conferences in the Arab countries as Tunisia, Egypt, Dubai and Bahrain to meet with delegates and officials active in photogrammetry, remote sensing and spatial information science in academic, business, administration and education fields and encouraging them to become a member of ISPRS.

- Organizing ISPRS event in the Saudi Arabia with title “International Geoinformatics conference 2019”.
- Translation of the ISPRS brochure into Arabic language for distribution in Nice Congress 2022
- Participation in an international exhibition about Geographical Environment data in Riyadh, KSA and encouraging organizations to become members of ISPRS.
- Accompanying ISPRS President in a visit to Mohammed bin Rashid Space Centre to discuss about organizing ISPRS Geospatial Week 2021 in Dubai.
- Organizing ISPRS event in the Saudi Arabia with title “International Geoinformatics conference 2021”.
- Efforts were made to win MOMRA as a sponsorship in ISPRS Congress 2022, Nice.

- Preparation of a brochure in Arabic language to introduce the ISPRS in the Arab States.
- Preparation for organizing ISPRS event in 2022 in Saudi Arabia

Priorities for the Future:

- ✓ Increase relevance to ISPRS members, expand membership
- ✓ Increase cooperation with sister societies
- ✓ Encourage countries and organizations within our region to become a member of ISPRS.
- ✓ Encourage members within the region to conduct activities to support the aims of ISPRS and attend national and regional activities within the region and promote the aims and activities of ISPRS





ISPRS site inspection at MBRSC in November 2018: ISPRS Treasurer Songhian Li, ISPRS President Christian Heipke, Ghariba Salem, Specialist Business Development, MBRSC, Abdalla Aloheid, ISPRS Vice Regional Coordinator for the Arab States, and GSW 2021 Director Saeed Al Mansoori (from left to right)

المؤتمر الدولي للمعلومات الجغرافية ٢٠١٩
International Geoinformatics Conference 2019
 ٥-٩ جمادى الآخرة ١٤٤٠هـ (١-١٤ فبراير ٢٠١٩) - ٥-٩ JUMADATI 1440 (10-14 Feb. 2019) - المملكة العربية السعودية - الرياض
 Kingdom of Saudi Arabia - Riyadh

Name and Type of Event	International Geoinformatics conference 2019 https://igc-sa.com/ Organized by : ISPRS (ICWG III/IVb) and Saudi Geographical Society (SGS) Venue : Sheikh Hamad Al-Jasser Hall, King Saud University, Riyadh, Saudi Arabia
Nº of participants	286 participants from 21 different countries
Nº of Paper	42 Oral presentations and 48 Posters

المؤتمر الدولي للمعلومات الجغرافية 2021م
INTERNATIONAL GEOINFORMATICS CONFERENCE 2021
 29 - 31 MARCH 2021 - RIYADH - KSA

Name and Type of Event	International Geoinformatics conference 2021 http://saudigs.org/en/news/igc-2021/ Organized by: ISPRS (ICWG III/IVb) and Saudi Geographical Society (SGS) Venue : The conference was <u>held</u> electronically through the SGS in the zoom
Nº of participants	325 participants from 14 different countries
Nº of Paper	60 Oral presentations and 12 Posters



ISPRS site inspection at MBRSC in November 2018:
ISPRS President Christian Heipke, ISPRS Treasurer Songnian Li,
Muhamad Alrajhi, ISPRS Regional Coordinator for the Arab States









Report of the ISPRS Student Consortium, Sheryl Rose Reyes, President

Important note: Parts of this report have been published in the ISPRS SC's past event reports in the

ISPRS SC Newsletter, the ISPRS eBulletin and the ISPRS Annals.

The Board of Directors (2016 – 2022)

Table 1. The former and current Board of Directors from 2016 to 2022.

	Name	Affiliation	Country	Position	Term
	Sheryl Rose Reyes	United Nations University Institute for the Advanced Study of Sustainability	Japan/ Philippines	President	2016 - 2022
	Charles Jjuuko	Makerere University	Uganda	Vice President Website Administrator Board Member	2019 – 2022 2017 – 2018 2016 - 2017
	Charmaine Cruz	Trinity College Dublin	Ireland / Philippines	Newsletter Editor-in-Chief	2018 - 2022
	Mustafa Ustuner	Yildiz Technical University	Turkey	Social Media Administrator	2016 - 2021
	Sona Guliyeva	National Aviation Academy	Azerbaijan	Website Administrator	2018 - 2022
	Jacky C. K. Chow	University of Calgary	Canada	Co- Chair/Secretary	2016 - 2018



Angelica
Kristina
Monzon

Center for Conservation
Innovations

Philippines

Newsletter
Editor-in-Chief

2018 - 2018



Kingsly Jeba
Ashish

Sam Higginbottom
University

India

Board Member

2017 - 2019

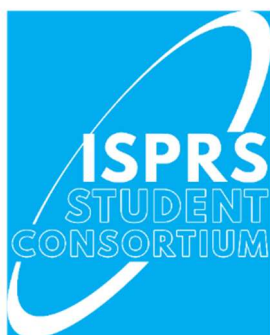


Figure 1. The official logo of the ISPRS SC.

The official logo used by the Consortium at present is a redesigned version of the original logo (Figure 1). This logo and its other color variations are used in all the communications and promotional media of the

organization. This was also designed by the ISPRS SC Design Team, comprised of volunteers from the Philippines.

Until the introduction of the new Statutes in August 2019, the Consortium was part of the Technical Commission V (formerly Technical Commission VI), "Education and Outreach," and collaborated with the Working Group V, "Promotion of the Profession to Young People." At present, the Consortium directly reports to the ISPRS Council through an Advisory Committee (AC). The Consortium is led by the Board of Directors, who controls and directs the affairs of the organization and aligns its activities and policies with the Society. The current Board of Directors are Sheryl Rose Reyes (President), Charles Jjuuko (Vice President), Charmaine Cruz (Newsletter Editor-in-Chief), Mustafa Ustuner (Social Media Administrator) and Sona Guliyeva (Website Administrator). Except for the Social Media Coordinator, all current elective officers have extended their services for another two years due to the pandemic (Table 1). The elected Co-Chair/Secretary and Newsletter Editor-in-Chief resigned in 2016 and were replaced in 2018, and the Website Administrator was replaced in 2019.

Membership

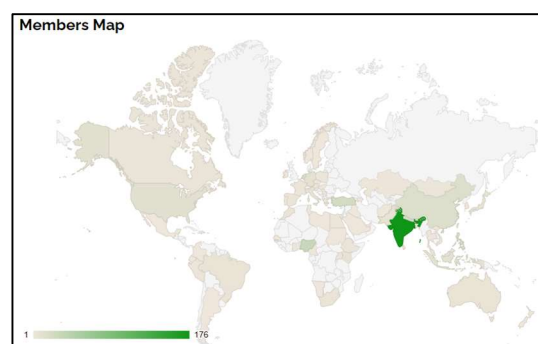


Figure 2. The members map of the ISPRS SC as of February 2022

The membership registration of the ISPRS SC was revised in 2020 and at present, we currently have a total of 517 members from 72 countries with the new system for individual membership registration, which follows the ISPRS individual membership process (Figure 2).

Our social media following also continued to increase in our most active accounts. As of 26 February 2022, our Facebook group has about 7,065 members

(<https://www.facebook.com/groups/isprssc>), 1,569 Twitter followers (@ISPRS_SC), and 745 subscribers on our YouTube channel (<https://www.youtube.com/c/ISPRSSC>). The Consortium also started an Instagram account but is currently inactive.

Summer Schools

One of the major activities of the Consortium is the summer school (Figure 3), which aims to provide opportunities for students and young researchers to participate in a series of lectures, practical sessions, technical tours, and social events at a minimum cost. It also provides a venue to build relationships and strengthen the network among participants, resource speakers, professors and experts from the

host country, which can potentially stimulate future collaborations and introduce the youth to the international scientific community.

A total of 12 summer schools were organized by the ISPRS SC from 2016 to 2019. Four of these summer schools were organized in partnership with the Asian Association on Remote Sensing (AARS) and the local organizers of the annual Asian Conference on Remote Sensing (ACRS). Three summer schools were hosted in Brazil, in partnership with the IEEE-GRSS Brazil Chapter and the IEEE-GRSS Young Professionals.

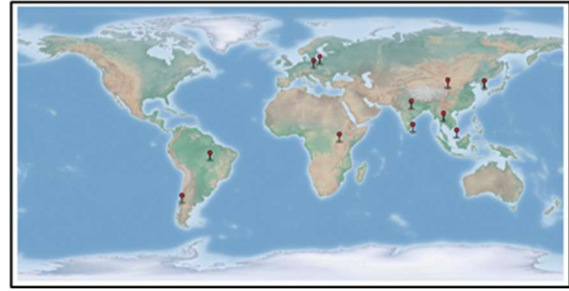


Figure 3. The locations of the in-person summer schools from 2016 to 2019.

Table 2. The ISPRS SC summer schools from 2017 to 2021.

Event Name and Dates	Theme
16th ISPRS SC and WG V/5 Summer School: Lages, Brazil (2 – 6 October 2017)	Multivariate Statistics, Introduction to Laser Scanning, and Image Processing with Google Earth Engine
38th Asian Conference on Remote Sensing ISPRS SC Summer School (30 October – 3 November 2017)	Geo-processing Tools and Technologies in Citizen Science
18th ISPRS SC and WG V/5 Summer School: Santiago, Chile (13 – 17 November 2017)	Land Cover Assessment and Monitoring Using Google Earth Engine
ISPRS Technical Commission III Midterm Symposium Summer School – Beijing, China (4 – 6 May 2018)	Innovative methods, theory and practice of earth observation and remote sensing technology for the measurement and mapping of complex urban environments
39th Asian Conference on Remote Sensing ISPRS SC Summer School (20 – 24 October 2018)	Big Geo-Sensing Data Ecosystem: Theory, Processing & Application
IEEE GRSS YP and ISPRS SC Summer School (29 October – 1 November 2018)	UAV Photogrammetry and Machine Learning Applications: Emerging Trends and Challenges for Earth Observation
ISPRS SC Summer School in Makerere University, Kampala, Uganda (22 – 24 July 2019)	Synthetic Aperture Radar (SAR) Remote Sensing Workshop
ISPRS SC Summer School in Wroclaw, Poland (26 – 30 August 2019)	Geospatial technologies for natural environment management and monitoring
40th Asian Conference on Remote Sensing ISPRS SC Summer School, Seoul, South Korea (21 – 25 October 2019)	New Remote Sensing Technology for Smart Future
5th ISPRS Student Consortium Summer School & IEEE GRSS Young Professionals, Sao Paulo, Brazil (10 – 14 November 2019)	Space Technology, Markets and Building the New Brazilian Space Age
6th ISPRS Student Consortium Summer School & IEEE GRSS Young Professionals (16 Oct – 11 Dec 2020, online)	Trends in Remote Sensing Science and Applied Machine Learning
Beijing University of Civil Engineering and Architecture (BUCEA), Beijing, China (19 – 23 July 2021, online)	Virtual Summer School on Smart City
7th ISPRS Student Consortium Summer School & IEEE GRSS Young Professionals (12 Aug – 16 Dec 2021, online)	Application of GIS, Remote Sensing and Artificial Intelligence in Agricultural Applications

The summer schools scheduled for 2020 were postponed due to the pandemic and the subsequent travel restrictions to many countries. As we transitioned to digital events, the ISPRS SC welcomed organizers who are willing to host the

summer schools online. The first virtual summer school was organized by Universidade Federal de Minas Gerais (UFMG) and the IEEE Geoscience and Remote Sensing Society (IEEE-GRSS) Brazil Chapter in 2020. The online summer schools continued in

2021, which started with the virtual summer school on Smart Cities that was organized by the Beijing University of Civil Engineering and Architecture, China and followed by the second edition of the virtual summer school hosted by IEEE-GRSS Brazil Chapter and Université de l'État de Santa Catarina.

Virtual Rooms

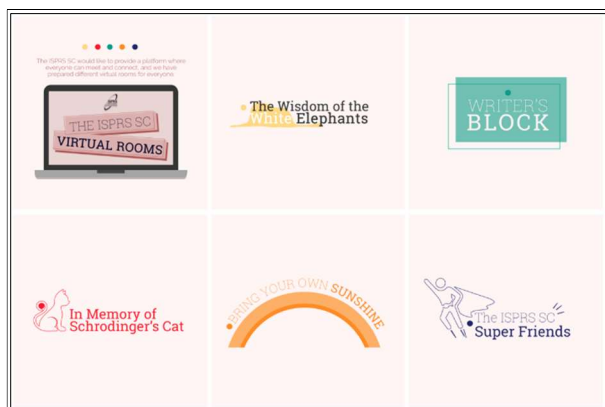


Figure 3. The five different rooms in the ISPRS SC Virtual Rooms.

The ISPRS SC Virtual Rooms were launched in April 2020 as the organization's response to country-wide lockdowns and the need to stay at home due to the COVID-19 pandemic. The Virtual Rooms were designed to serve as venues for open discussion, informal lectures, and the exchange of ideas. The Virtual Rooms were hosted from 5 April to 30 April 2020. We created a single registration for simplicity since it was hosted on an almost daily basis. We also intended for this initiative to be a venue where people could join if they were available or if they were interested in the topic of one of the upcoming Virtual Rooms. Three of the Virtual Rooms were open rooms, which include In Memory of Schrodinger's Cat, Writer's Block and Bring Your Own Sunshine! – moderated by the Board of

Directors and some of our good friends as guest moderators (Figure 4). The open rooms provided a more relaxed atmosphere to our members, where we can freely exchange ideas, ask and give advice and to simply enjoy having a good conversation with fellow students and young researchers from different countries (Figure 4).

The other two Virtual Rooms featured very special guests, the Wisdom of the White Elephants and the ISPRS SC Super Friends. The Wisdom of the White Elephants featured the legends of remote sensing, photogrammetry and spatial information science, from the ad hoc committee of ISPRS called The White Elephant Club. We recorded a total of 215 responses. About 46% of the registered participants were students, 39% were young professionals and about 15% were classified as others (i.e., industry expert, faculty member, government employee). We had an average attendance of about 21 participants for the Wisdom of the White Elephants and The ISPRS SC Super Friends.

The Virtual Rooms also welcomed a collaboration and celebration with ISPRS and the ISPRS White Elephant Club (Figure 5). On 17 June 2020, colleagues, friends, family and followers of Dr. Gottfried Konecny gathered in celebration of his 90th birthday. Taken under the Virtual Rooms branding, the Wisdom of the White Elephants, and pertinently titled, "A Life for Photogrammetry and Remote Sensing," this event presented our members with a timeline of the experiences, contributions, and achievements of Dr. Konecny and a glimpse of his personal life. It was a very well-attended event with over 160 guests who celebrated and greeted him on this special occasion. An editorial related to this event was published in The Photogrammetric Record in September 2020.



Figure 4. Dr. Gottfried Konecny's 90th birthday celebration in the Virtual Rooms - Wisdom of the White Elephants.

Webinar Series

The first webinar, titled “Deep Learning for Photogrammetric Analysis and Remote Sensing,” was held on 20 February 2020 with Dr. Konrad Schindler, a professor at the Department of Civil, Environmental and Geomatic Engineering, Institute of Geodesy and Photogrammetry in ETH Zürich, as guest speaker. The lecture provided an overview of deep learning and its applications in the era of big data. The second webinar was on the topic of “Digital Animal Conservation - From Flying UAVs to

Mapping with Deep Learning” and was hosted on 21 May 2020. Dr. Devis Tuia, who was then a professor at Wageningen University, the Netherlands (Figure 4), was guest speaker for this event. His lecture focused on how digital technologies such as advanced imaging and cutting-edge computer vision coupled with advanced deep learning methods could support wildlife conservation and protect biological diversity. Two webinars were hosted under the topics of deep learning and computer vision.

Table 3. The lectures presented in the ISPRS SC Webinar Series.

Title	Speaker(s)	Registration	Participants
Deep Learning for Photogrammetric Analysis and Remote Sensing	Dr. Konrad Schindler, ETH Zurich	361	91
Digital Animal Conservation - From Flying UAVs to Mapping with Deep Learning	Dr. Devis Tuia, University of Wageningen	414	94
Collaborative Humanitarian Mapping with PoliMappers and UN Mappers	Dr. Maria Brovelli, Politecnico di Milano, UN Mappers and PoliMappers	119	52
Deep ensembles for global vegetation analysis - ISPRS SC Webinar Series	Dr. Jan Dirk Wegner, University of Zurich/ETH Zurich	93	32

The webinar entitled “Collaborative Humanitarian Mapping with PoliMappers and UN Mappers” was organized on September 16, 2021 with Professor Maria Antonia Brovelli from Politecnico di Milano, Chiara Ponti from PoliMappers and Michael Montani from UN Mappers as the guest speakers. This webinar highlighted how an individual or a

team can contribute and offer theoretical insights on the collaborative humanitarian mapping and OpenStreetMap (OSM). A practical session in the form of a mapathon was conducted, which involved the step-by-step procedure on how to edit data in OSM.

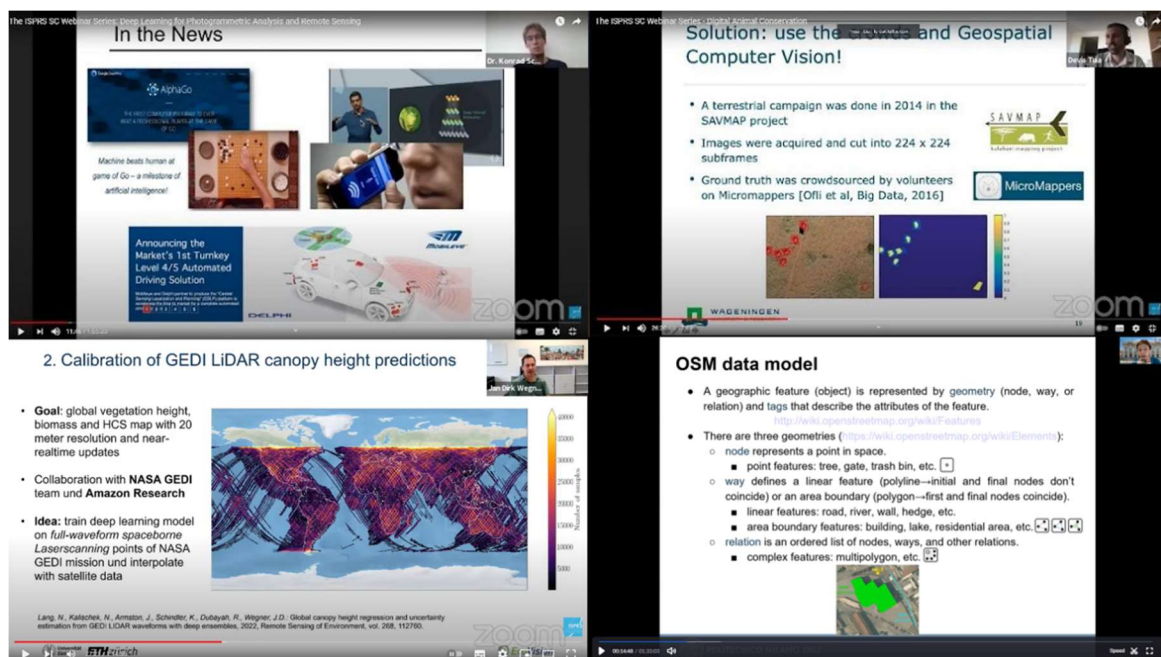


Figure 5. Snapshots from the ISPRS SC Webinar Series

Another webinar on “Deep ensembles for global vegetation analysis” was conducted on November 19, 2021; the guest speaker was Dr. Jan Dirk Wegner, an Associate Professor and the Head of the EcoVision Lab at ETH Zurich. During this webinar, Dr. Wegner lectured on the application of satellite images for the vegetation canopy analysis, the development of the global reference vegetation dataset for supervised machine learning techniques. He also presented the research about integration of probabilistic approaches and deep ensembles techniques for the global determination of vegetation height.

The webinar video recording and presentations are uploaded to the ISPRS SC website and can be viewed by accessing the link: http://sc.isprs.org/isprs_sc_webinars.html.

Newsletters

From 2016, the Newsletter has been running for 8 years. The Newsletter has been one of the major modes of communication and ways of disseminating information to the members. However, the Newsletter also needs to keep up with the changing time, the fast-paced Internet, and the diversity of its readers. In line with this, the ISPRS SC board members, through the Chair and the leadership of the Newsletter Editor-in-Chief, initiated the repackaging of the Newsletter.

The final outcome of the discussion was SpeCtrum – indicative of the electromagnetic spectrum, which is one of the principles in remote sensing, and at the same time, containing the initials S and C, to represent the Student Consortium (see Figure 7).

In addition to the significance of SpeCtrum in the discipline, the name is also an epitome of diversity and now that the scientific community has welcomed the era of multidisciplinary, interdisciplinary, and transdisciplinary research, this publication aims to cover the wide range of

applications related to our profession. Quoting the message from the ISPRS SC Chair in the first issue, “Just like the electromagnetic spectrum, defined by wavelengths and frequencies, SpeCtrum opens an opportunity for everyone to realize the entire scope of our profession, in varying fields of expertise and applications.” The SpeCtrum was launched in September 18, 2017, around the time of the Geospatial Week 2017, with the theme about the ISPRS and the Council (Figure 4). This issue was followed by an issue about the Technical Commissions released for ACRS 2017.



Figure 6. The design for SpeCtrum: The Official Newsletter of the ISPRS Student Consortium, created by the Design Team.

The issues of SpeCtrum feature several sections, also named after common terms in the disciplines of remote sensing, photogrammetry, and spatial information sciences, and some other sections retained from the original Newsletter. Backsight is the section featuring past event reports. Spotlights are feature articles about important events and scientific articles related to the theme of the Newsletter issue. I-F-O-V, an acronym for the instantaneous field of view, is recreated in the Newsletter as Important-Focused-Outstanding-Valuable, for the interviews with professors and experts renowned in the community. In the Horizon is a list of upcoming events relevant to our profession. Foresight is about upcoming ISPRS and ISPRS SC events and opportunities. SpeCtrum envisions to deliver timely issues and to invite more members to contribute their scientific work and personal experiences.

Table 4. The SpeCtrum issues published from 2017 to 2021, including the number of reads recorded in the uploaded version in Scrd.

Title	Vol no.	Issue no.	Date published	No. of reads
Remote Sensing of Coastal Environments	15	2	Dec 2021	505
Geospatial Technologies for the Conservation and Promotion of Cultural Heritage in support of the UN Sustainable Development Goals	15	1	Aug 2021	182
UAS for Environmental Monitoring	14	4	Apr 2021	924
SAR Remote Sensing	14	3	Dec 2020	959
3D GIS	14	2	Sep 2020	557
The Roles of Geospatial Information During the COVID-19 Pandemic	14	1	Jul 2020	1229

Applications of Remote Sensing and Geospatial Information to Climate Change	13	4	Feb 2020	846
Advances in Remote Sensing and Spatial Information Science in Africa	13	3	Dec 2019	529
Remote Sensing of Blue Carbon Ecosystems	13	2	Aug 2019	190
Women in Remote Sensing and Geospatial Information	13	1	Apr 2019	1348
Citizen Science and Geoinformatics	12	4	Jan 2019	
Ecology and Conservation	12	3	Sep 2018	274
Photogrammetry and Computer Vision	12	2	Jun 2018	421
The ISPRS Midterm Symposia Special Issue	12	1	Jun 2018	71
RS and GIS in Forest Management	11	4	Mar 2018	
The ISPRS Student Consortium: 2017 in Review	11	3	Dec 2017	363
The Technical Commissions: An Overview	11	2	Oct 2017	363
The Leaders Behind the Society: The ISPRS Council	11	1	Sep 2017	422

Table 4 lists all the issues of SpeCtrum published from 2017 to 2021. The most read issues were Women in Remote Sensing and Geospatial Information, and The Roles of Geospatial Information During the COVID-19 Pandemic. The Newsletter continues to invite experts in the remote sensing, photogrammetry, and spatial information and identifies the most relevant themes for the upcoming issues.

Website

The website was in operation starting March 28, 2017. The layout was proposed by the ISPRS SC Chair, the design of the ISPRS banner and the logos were created by the Design Team, and the implementation was made by Mr. Markus Englich. The layout of the website was intended to be simple and clean, with a user-friendly navigation. The website is comprised of the following sections:

Home, About, Members, News, Events, Newsletters, Summer Schools, Opportunities and Links. Quick links to the social media account of the ISPRS SC are found at the end of the web pages.

ISPRS Congress

The ISPRS Virtual Event was held from August 31 to September 2, 2020. The ISPRS Student Consortium's Youth Forum was hosted as a joint session with the Technical Commission V – Education and Outreach on September 1. The Youth Forum sessions were moderated by Sheryl Rose Reyes, President of the ISPRS SC, and Dr. P. N. L. Raju of Technical Commission V. Three presentations were delivered in the Youth Forum, including one live talk and two pre-recorded videos (Figure 8). The Youth Forum contributed a total 12 papers, three for the ISPRS Annals and nine for the ISPRS Archives for this edition of the ISPRS Congress.

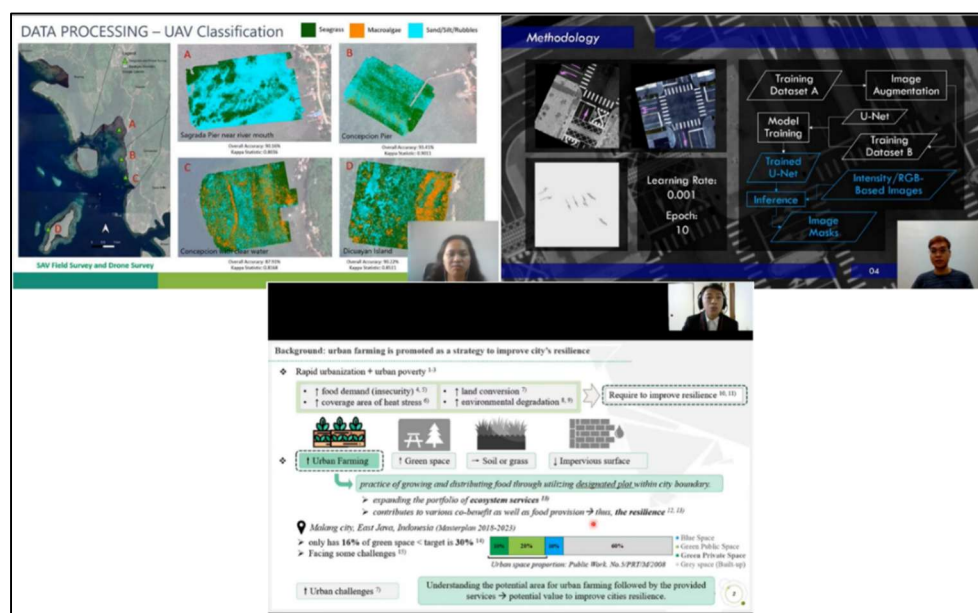


Figure 7. The Youth Forum presentations in the ISPRS Congress 2020 virtual edition.

We again joined Technical Commission V in the joint session of the Education and Outreach track in 2021, which included the presentations for the Youth Forum (Figure 9). Our President, Sheryl Rose Reyes, presented the paper entitled, “Creative strategies in navigating the new normal: advancing the contributions of the ISPRS Student Consortium as an international organization.” She shared the activities and development in the Consortium and how the organization adapted and advanced during

this challenging time. Also, presented in this live session was the paper entitled, “Regression analysis of errors of SAR-based DEMs and controlling factors” by Yen Wi Wu and Hsuan Ren of the National Central University in Taiwan. The authors used InSAR for topographic mapping, to provide a formal description that attempts to explain the relationship between SAR-measured elevation height and controlling factors.



Figure 8, The presentation by Yen Yi Wu of the National Central University and the session chairs, Dr. Senthil Kumar, President of Technical Commission V and Sheryl Rose Reyes, President of the ISPRS SC.



Figure 9. Our special guests for the panel discussion in the forum, which was moderated by the ISPRS SC President, together with Adele Roccato of UNEP.

Finally, the main highlight of this year's Youth Forum track is the forum entitled, “Towards Transformational Change: Potential Contributions of ISPRS and the Role of the Youth in Sustainable Development.” This forum was organized in partnership with the United Nations Environment Programme (UNEP). The main objectives of this forum were to promote the recently released Global Environment Outlook 6 for Youth report (#GEO6YouthReport, <https://www.unep.org/resources/geo-6-youth>) and to engage the youth and experts in ISPRS in a

discussion about the linkages between sustainable development and the fields of remote sensing, photogrammetry and spatial information science (Figure 10). We had the privilege of having the GEO for Youth Authors, AlAnoud Al-Khatlan and our President, Sheryl Rose Reyes, sharing the valuable information from UNEP's first fully interactive epublication. This presentation was followed by Dr. Christian Heipke's discussion on the roles of remote sensing, photogrammetry and spatial information science in sustainable development. This was followed by a panel discussion with our special

guests, Maria Antonia Brovelli (Politecnico di Milano), Khaled Mashfiq (UNOSAT), Laura Mugeha (Sanergy/Youth Mappers), Thuy Le Toan (CESBIO) and Pierre Boileau (UNEP). The discussion was driven by questions that would help identify the roles of ISPRS and the contributions of the youth towards a more sustainable society. We also requested audience participation through questions we posted via Mentimeter.



For the upcoming ISPRS Congress this 2022, the ISPRS SC is organizing a forum on women in remote sensing, photogrammetry and spatial information science. The Consortium will also participate in the General Assembly. Special issues of *SpeCtrum* will also be published for the Congress. A total of seven contributions have been submitted to the Youth Forum, with one full paper and six abstracts.

ISPRS Education and Capacity Building

The Consortium was also one of the first recipients of the grants under the 2018 ISPRS Education and Capacity Building Initiatives. The ISPRS SC, in collaboration with the Geo-informatics and Space Technology Development Agency (GISTDA), Thailand's public organization leading the country's activities in space technology and geo-informatics applications and the ASEAN Research and Training Center for Space Technology and Applications (ARTSA), organized MOTIVATE Learning: Making Opportunities to Initiate Valuable Alliance through Experiential Learning from August 6 – 20, 2018 in Space Krenovation Park, Chon Buri, Thailand. The project was designed to build the capabilities of students and young professionals in the fields of remote sensing, photogrammetry and spatial information sciences. MOTIVATE Learning was comprised of two programs: (1) ISPRS SC Summer School + Hackathon and (2) The Spatial Exchange Program (Figure 11). The ISPRS SC Summer School followed the conventional design of the summer schools, with the addition of the 2-day hackathon as

a challenging activity after the lectures, practical sessions and break-out sessions, which resulted to 4 innovative ideas using geospatial information in tourism, public health, infrastructure and transportation, and emergency response. The Spatial Exchange Program was an 8-day exchange program for students and young professionals, in which the participants were guided by groups of mentors from different universities and organizations. The research from this program included disaster risk reduction, environmental monitoring, emergency decision support system and carbon stock assessment.

For 2022, the ISPRS SC President Sheryl Rose Reyes joined Working Groups from Technical Commissions IV and V for implementing the

Figure 10. The participants of the Spatial Exchange Program under MOTIVATE Learning.

Education and Capacity Building Initiative entitled, "Capacity Building for GIS-based SDG Indicator Analysis with Global High-resolution Land Cover Datasets." The ISPRS SC and WGs will be collaborating with the organizers of the forum on geospatial information enabled SDG monitoring in the upcoming ISPRS Congress in June 2022.

GeoMixer

The ISPRS Student Consortium, in collaboration with the Ladies of Landsat, Sisters of SAR, American Society for Photogrammetry and Remote Sensing (ASPRS) Student Advisory Council, Mato Grosso do Sul IEEE-GRSS (MS IEEEGRSS) Student Branch Chapter, and the Asian Association on Remote Sensing (AARS), started a monthly virtual event called GeoMixer. Inspired by the GeoMixers organized in previous conferences, this event provided a platform for remote sensing scientists at all career stages from around the world to build their professional networks. The kick-off GeoMixer event was hosted in January 2021 with over 40 participants from across the globe. The initial registration for the event recorded the contact information of about 135 individuals interested in participating in the monthly GeoMixer events. The GeoMixer was also hosted in the virtual edition of the ISPRS Congress in 2021. We had the honor of having several White Elephant Club members joining the GeoMixer and the current ISPRS President, Dr. Christian Heipke, interacting with our participants and playing the game, "Scattergories," which proved to be challenging and fun! We had about 38 participants who joined us in this virtual networking event. In November 2021, the event was part of the Asian Conference on Remote Sensing, which served as the official networking event of the conference. Finally, the last GeoMixer

for the year was hosted in the Geo for Good Summit, organized by Google (Figure 12).



Figure 11. The GeoMixer hosted in the Geo for Good Summit.

EarthEngine@SG

The Google Earth Engine Singapore (EarthEngine@SG) is a virtual meetup that took place on 13th September 2021, as part of the Singapore Geospatial Festival 2021. Lead by the Nanyang Technological University Singapore – Asian School of the Environment, the ISPRS SC is one of the co-organizers of the event, together with National University of Singapore – Centre for Nature-Based Climate Solutions, Imperial College London, Earth Observatory of Singapore and Sabrina Szeto Consulting (Figure 13).

The keynote presentation was delivered by Dr. Nicholas Clinton, Developer Advocate at Google, who gave an overview of the current and future

capabilities of the GEE. After a short break, the audience participated in their selected parallel session and specific topic of interest. Keiko Nomura, Director of Product Development at Climate Engine, gave a lecture entitled, “Fate of forests at your fingertips”.

Nicholas Murray, Senior Research Fellow at James Cook University talked about “Losses and gains of Earth’s intertidal ecosystems”. Jakrapong Tawala, Satellite Analyst at the United Nations Satellite Centre, talked about “GEE for the United Nations humanitarian assistance missions”, while Mong Suan Yee, Director of Engineering at Kumi Analytics, provided a lecture on “Machine Learning with Google Earth Engine.”



Figure 12. The ISPRS SC together with the organizers of the EarthEngineSG in the Singapore Geospatial Festival.

A virtual networking session followed, which engaged the participants in discussions on the various applications of GEE as well as their visions for its future as one of the many users of this platform. The afternoon was reserved for three different workshops where the audience was guided by the experts in GEE to work on practical. Minerva Singh, Research Fellow at Imperial College London, provided an introduction to GEE for beginners, Keiko Nomura presented tips and tricks for the intermediate audience, while Yvonne Fong, Data Scientist at EO Data Science, provided an intermediate to advanced level overview of the Google Earth Engine Apps. A follow-up in person meeting is scheduled on April 25, 2022 in Singapore.

Leadership and Service Mentoring Programme

The ISPRS SC Board of Directors, given the extended term, worked on activities that can be promoted to foster meaningful connections among the organization's members and to further the advancement of their personal and professional skills. In order to train and familiarize aspiring applicants for the next Board of Directors, the Leadership and Service Mentoring Programme was launched in December 2020. This programme primarily aims to train and familiarize qualified individuals with the responsibilities of the position they are interested in and about the activities of the Consortium. In addition, they will be involved and immersed in the actual work done by the current Board of Directors and will be given a set of milestones that must be achieved by the end of the

programme. Lastly, this programme aims to provide skills necessary not only on the professional level, but also skills that can contribute to one's personal growth through cooperation and coordination of activities and the development of ideas to foster the career advancement and professional progress of the members of the Consortium. Outstanding mentees will be nominated by the current Board of Directors for the next ISPRS SC elections.

A total of seven mentees were accepted to the programme, with all positions in the Board of Directors with at least one mentee. Based on the questions asked during the application, the majority of the mentees became interested in getting more involved because of their participation in the Webinar Series and the Virtual Rooms. Furthermore, the opportunity of connecting with ISPRS experts through these online events motivated them to learn more about the ISPRS SC.

Nominations and Elections

The five mentees from the Leadership and Service Mentoring Programme were nominated to the Board of Directors for the term 2022 – 2026. Additional nominations were received during the call in February 2022 and two more qualified candidates were identified for the open positions, specifically for the Social Media Administrator and Board Member. The elections were held in March using the online platform, Election Runner. The newly elected Board of Directors are listed in Table 5.

Table 5. The elected Board of Directors for the term 2022 - 2026.

Name	Country	Position
Laxmi Thapa	Nepal	President
Nicolas Pucino	Australia	Vice President
Sunni Kushwaha	India	Newsletter Editor-in-Chief

Miguel Luis Lagahit	Philippines	Social Media Administrator
Yogender Yadav	India	Website Administrator
Chukwuma Okolie	Nigeria	Board Member

The period after the elections until the ISPRS Congress 2022 will be the transition period for the current and incoming Board of Directors.

Student Chapters

The document related to the Student Chapters was finalized. Due to the uncertainties brought about by the pandemic, this program was not launched. It will be passed on to the next Board of Directors.

Publications

Reyes, S. R., Jaojoco, A. K. M., Cruz, C., Jjuuko, C., Üstüner, M., Chow, J. C. K., & Guliyeva, S. (2020). The ISPRS Student Consortium: Sustaining Relevance and Creating Shared Visions for the Youth. *ISPRS Annals of Photogrammetry, Remote Sensing & Spatial Information Sciences*, 5(5).

Reyes, S. R., Cruz, C., Üstüner, M., Jjuuko, C., & Guliyeva, S. (2021). Creative Strategies in Navigating the New Normal: Advancing the Contributions of the Isprs Student Consortium as AN International

Organization. *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, 5, 23-30.

Other Activities

The Asian Conference on Remote Sensing (ACRS 2020) organized annually by the Asian Association on Remote Sensing (AARS) and this year, together with Chinese National Committee for Remote Sensing (CNCRS), arranged a special panel discussion related to the roles of international academic societies during this pandemic. Ms. Sheryl Rose Reyes, President of the ISPRS SC, participated in this panel discussion together with Dr. Christian Heipke, Dr. Paolo Gamba and Dr. Gu Xingfa and the session was moderated by Dr. Kohei Cho. The ISPRS SC President held a presentation on the challenges that many of the Consortium members faced at the onset of the pandemic and provided several examples of the activities developed and hosted by the organization in order to support the youth at this challenging time. You can visit the official AARS website for the presentations in this panel discussion: <https://a-a-r-s.org/2020/12/14/the-panel-session/>.



Figure 13. The panel discussion in ACRS 2020 on the roles of international academic societies in the pandemic.