

Report on 2015 ISPRS Technical Commission II Midterm Symposium

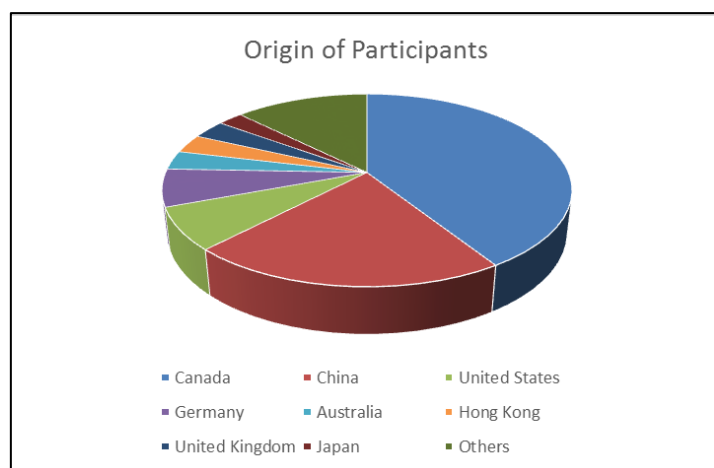
Joint International Conference on Geospatial Theory, Processing, Modelling and Applications, 6-8 October 2014, Toronto, Canada

Songnian Li, Suzana Dragicevic (TC II President and Vice-President)

The ISPRS TC II Midterm Symposium is held every four years in between two consecutive ISPRS Congresses. The aim of TCII midterm symposiums is to bring together academics and professionals from the international community of spatial information sciences and engineering to present latest research achievements and technological developments in the field. This year's symposium was held in Toronto, Canada from October 6 to -8th, 2014, together with 2015 Spatial Data Handling Symposium. The joint conference was a continuous effort on building long-term cooperation between ISPRS and IGU.

The conference brought together over 150 professionals from 24 countries, where majority were from Canada, China, United States and Australia, to present ongoing research and ideas related to geospatial theory, processing, modelling and applications with a quite number of talks on GIS data acquisition technologies, e.g., remote sensing and global navigation satellite systems. It also aimed to address the current and upcoming scientific, technical, and business issues of applying geospatial theory, processing, modelling techniques in surveying and mapping, geosciences, marine science, forestry, environment, transportation, disaster management communities and social studies.

The conference topics and the theme on "Building Connections in GISciences for Future" were set to fulfil the goal of bridging the gap between geospatial theory and technologies. A uniformed program, without "ISPRS" or "IGU" sessions, was developed with 3 general sessions, 24 parallel technical sessions, and 1 poster session. 4 keynote presentations, 88 oral presentations and 11 posters were presented during the conference.

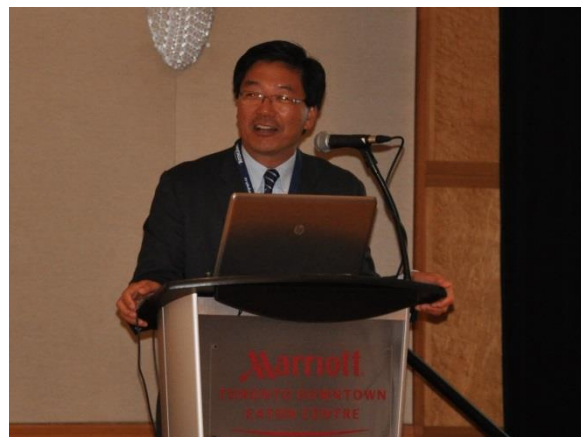


The keynote speakers talked about some important aspects of geospatial theory, processing, modelling and applications, ranging from key challenges related to new SDI initiatives through framework of alternative GIS and shift from accurate to useable map-like representations to

how new geospatial technology can help deal with changes and translate changes into actions.

The topics are as follows:

- "Challenging traditional models, roles and responsibilities in evolving spatial data infrastructures", by David Coleman, University of New Brunswick, Canada
- "Alternative GIS (Alt.GIS) and the six senses of the new mind: Is Alt.GIS transforming GIS into a liberation technology?", by Daniel Sui, Ohio State University, USA
- "From accuracy to usability: the emerging of map-alike representations", by Zhilin Li, Hong Kong Polytechnic University, China
- "Make sense of the dynamically changing world", by Brad Schmidt, Intergraph Canada, Canada



David Coleman (upper-left), Daniel Sui (upper-right), Zhilin Li (low-left) and Bradley Schmidt (low-right) deliver their keynote presentations

The technical sessions were organized based on the topics in a uniformed program, which covers the following topics. Participants had the opportunity to engage into not only scientific and practical discussions, but also some pre-conference workshops.

- Spatio-temporal modeling and dynamics
- Multi-scale n-dimensional spatial data representations, data structures and algorithms
- Spatial analysis, data mining and spatial statistics
- Data quality and uncertainty modeling
- Geospatial computation, geo-design and geospatial simulation
- Geographical visualization and virtual reality
- Geographical decision support systems and decision theory
- GIS systems analysis, design and implementation
- Spatial knowledge discovery and data mining
- Mobility: tracking, analysis and communication
- Semantic interoperability and ontology for geospatial information
- Web-based methods and systems for spatial information dissemination
- Effective, efficient and responsible use of geographical information in society
- GIS systems, analysis, design, implementation and cyber-infrastructure
- Geomatics data acquisition for GIS (e.g., GNSS, Remote Sensing, Mobile Mapping etc.)
- GIS and applications (social, physical, environmental and health)
- GIScience and Technology Education and Training



Photos taken during conference sessions

The joint conference offered two “Best Student Author Awards” to encourage student authors to present high quality full papers and two "Best Poster Awards" for the selected posters based on their scientific contents and design. The best student paper and the best poster winners received a certificate, and were all eligible for one-year membership to the Canadian Institute of Geomatics. The best papers were selected by the Scientific Committee and the best posters were evaluated and selected by a committee: Dan Griffith, Chris Gold and Francis Harvey. Besides, three participants were also selected to receive ISPRS Travel Fund (announced on ISPRS website). The following are the winners for these awards:

- Best Paper Award: HAYDN LAWRENCE (University of Waterloo), "Identifying optimal study areas and spatial aggregation units for point-based VGI from multiple sources"
- Best Paper Award: XUEBIN WEI (University of Georgia), "A hybrid GWR-based height estimation method for building detection in urban environments"
- Best Poster Award: ANDREW LEUNG (University of Waterloo), "The relationship between violence, alcohol availability, illegal drug use and land use in Toronto"



Awardees and student volunteers receiving their certificates

The conference was very lucky to have a large group of student volunteers who contributed greatly to the smooth execution of the pre-conference preparation, conference registration,

logistics, and conference programs. Without their dedicated assistance, the conference would not have been done successfully.

The conference appreciated very much the support of Intergraph Canada as Gold Sponsor, GeoWay from China and Airborne Sensing from Canada as Silver Sponsor, GeoStar from China as Bronze Sponsor, and ESRI Canada and Association of Ontario Land Surveyors (AOLS) as Advertiser Sponsors. Specially, we were grateful to the substantial financial support provided by Ryerson University's Vice President Research's Office and Faculty of Engineering and Architectural Science. A small exhibition was also held during the conference for three days with the following exhibitors: Intergraph Canada, PCI Geomatics, Sani-International, Airborne Sensing, Topcon Sokkia, ESRI Canada, Canadian Society of Remote Sensing (CRSS), and Canadian Institute of Geomatics (CIG). All lunches and coffee breaks were offered in the exhibition area to maximize the interests of participating companies.



Interaction between conference attendees and exhibitors

A conference reception and dinner were held in the conference hotel. Together with all coffee breaks and lunches offered in the exhibition hall, these social events allowed participants plenty of opportunities to interact with exhibitors and make network connections with old and new colleagues. City tours and a post-conference day tour to the beautiful Niagara Fall were also organized for the registered people through external tour service providers.



Photos of conference dinner

In summary, the conference has received very positive feedback from the participants about the contents presented, conference organization and technical program offered. A uniformed technical program was proved a good option for such a joint conference, in comparison with more traditional program with separate program streams associated with each joint component. On behalf of conference chairs and LOC chairs, we would like to thank all who contributed to the success of this joint conference.



ISPRS 1st VP, conference chairs, and LOC chairs



Conference opening session