

Highlights

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ISPRS Highlights

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Parallel to developments in space technologies, new sensors turn out to be available to mapping community, either active sensors (SAR, InSAR) or passive sensors with increasing spatial and spectral resolution. <u>Topographic</u> <u>Mapping from Space</u>

The Lijiang River is the most important part of Guilin's scenery.



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Editorial

By Ian Dowman, President ISPRS

The ISPRS Council has to consider many issues which range from long term strategies for the Society, crises which demand immediate attention, and routine matters such as new members and approval of meetings. In recent articles and presentations I have tended to concentrate on the strategic issues which Council is promoting: these include our policy to promote IS-PRS in Africa and our involvement in GEO, the Group on Earth Observation. These are important topics, the success of which, will affect the perception and influence of ISPRS in years to come. In this first issue of the electronic version of ISPRS Highlights I would like to turn to the more routine, but crucially important, issue of what ISPRS offers to its members. Council is currently considering the level and structure of fees which will be proposed to the General Assembly in Beijing in 2008. A rise in fees is essential in order to provide the Society with sufficient funds to continue its day to day operations, and to be able to support important activities such as outreach and scientific initiatives: but at the same time we have to ensure that members feel that they are getting good value for money. ISPRS provides its members with an international voice for photogrammetry and remote sensing and we try to use that effectively for the benefit of members, enabling them to participate in the activities of bodies such as the United Nations and The International Council for Science (ICSU). We also provide members with this bulletin and with the ISPRS Journal of Photogrammetry and Remote Sensing, albeit the latter not normally free of charge. And of course we organise meetings and are able to provide funds for some people to attend these. Is this enough? Do you feel that you have good

value for your subscription? What else can IS-PRS provide?

Another issue is the structure of fees. Do countries with a large membership pay too little? Do poor countries pay too much? Or maybe vice versa. We would like to have your comments on these questions, so that we can present an acceptable package to delegates at the General Assembly. We also want to increase our membership and readers who are not members might like to consider asking their organisation to join, and consider whether what we have to offer is worth having. Let me have your comments on this as well.

Whilst pondering these important questions, enjoy this eBulletin, and pass it on to your friends. One of the objectives of distributing Highlights in this new form is so that it can reach a wider audience. Do not dismiss it as another industry news letter; this is the ISPRS Newsletter and will contain ISPRS news and views. It should be essential reading for all representatives of IS-PRS members, but should also be of interest to anyone concerned with international activities in photogrammetry and remote sensing. Read it. Enjoy it. And let us have your comments.



Geo-Sibir 2006

by Gottfried Konecny



Ivan Antipov

In Novosibirsk in Siberia the second exhibition and conference "Geo-Sibir 2006" took place from April 24 to 28, 2006.

The organisation of the conference was in the hands of the Siberian Academy for Geodesy, and the exhibition was arranged by the company "Sibirskaja Yarmarka".

A great number (several hundred) conference papers in Russian language demonstrated the traditional professional high-level knowledge of the Siberian participants, mostly graduates of the well known NIGAIIK (Novosibirsk Academy for Geodesy and Cartography).

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ISPRS workshop on Multiple Representation and Interoperability of Spatial Data

by Jantien Stoter and Edward Verbree

22 t/m 24 February 2006, Hannover

At the end of February the 'ISPRS workshop on Multiple Representation and Interoperability of Spatial Data' took place in Hanover. The workshop was an initiative of two ISPRS working groups: II/3 (Multiple representations of image and vector data) and II/6 (System integration and interoperability) and intended to bring together researchers dealing with semantic and geometric data integration, data representation in Multiple Representation Database (MRDB) structures, as well as generating and exploiting the links between multiply represented objects.

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First of ISPRS's Eight Mid-term Symposia Held At ITC, The Netherlands

by John van Genderen

This year, ISPRS holds eight Mid-Term Symposia, one for each of its Technical Commissions. The first of these, organized by Technical Commission 7 on: "Fundamental Physics and Modelling", was held at the ITC in the Netherlands, on the theme of: "From Pixels to Processes". It was attended by more than 500 participants from more than 75 countries, making this a truly international event. The Opening Keynote Speaker was Prof. Richard Bamler from the DLR in Germany. There were 24 Technical sessions, three poster sessions, and five very well attended Pre-Symposium Workshops. In addition, there were some special sessions, plenary sessions, and a very nice social programme. Very noticeable at this major remote sensing event was the large number of younger researchers (Ph.D. researchers and Post Doc.'s) that were afforded opportunities to present oral papers. This augers well for the future of remote sensing. For proceedings, and further information, please go to

Minutes of the Council Meeting, 13th – 15th May 2005, Zurich

Read the minutes online

ISPRS Council members with their spouses and the host Prof Gruen at a day tour.



Read minutes online



ISPRS Council and TC Presidents during the Joint Meeting at ITC

Correction

Corrected Picture for the caption "ISPRS President Ian Dowman, visited Events Calendar, Tuan-Chih Chen, in March 2005 in Taiwan" in the March issue on Page 57.





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Summer Schools

Report on the International Summer School "Digital Recording and 3D Mod- Rea eling" by Martin Sauerbier

The International Summer School on "Digital Recording and 3D Modeling", organised by ISPRS Commission VI SIG "Technology Transfer Caravan", Aristotle University of Thessaloniki and ETH Zurich, attracted participants from all over the world. During one week, 3D measurement and modeling techniques, duced by well-known experts. er d- Read more



International Summer School on Advances In Medical Imaging Cording and modeling in medical applications. The 16 Summer School participants were PhE students and young researchers from Medicine

by Petros Patias

The ISPRS Working Group V / 6 - Medical image analysis human motion and body measurement organized an International Summer School on ADVANCES IN MEDICAL IMAGING in Aghios Nikolaos, Crete, Greece, 24-29 April 2006.

The School's purpose was to bring together young scientists and developers from different disciplines (medical doctors, radiologists, computer graphics and 3D modeling engineers, photogrammetrists, digital image analysts, etc), the common denominator being their interest in Medical Image Analysis, to study and discuss the latest developments in digital imaging, recording and modeling in medical applications. The 16 Summer School participants were PhD students and young researchers from Medicine, Photogrammetry, Electrical Engineering, Computer graphics, etc., and the 11 Lecturers were all world known experts in the field coming from 7 Universities and international Institutes (Aristotle Uni,, Uni. of Brussels, ETH, Princeton, Uni. of Heidelberg, etc) <u>Read more</u>

processing methods and sensors were intro-



ASPRS 2006 Annual Conference – A Great Event!

by AnnaMarie Kinnerney

The ASPRS 2006 Annual Conference was held May 1-5 at the Reno Hilton Hotel, Reno, Nevada with nearly 1400 attendees. This year's conference, Prospecting for Geospatial Information was opened with

a keynote address delivered jointly by Stephen K. Robinson, PhD, NASA Astronaut and Donn Liddle with Muniz Engineering. Their presentation, "Inspecting the Space Shuttle in Flight using Photogrammetric and Remote Sensing Technology," captivated the audience as they described how photogrammetry played a crucial role in determining the seriousness of damage to the thermal tiles on the last Space Shuttle mission.

Read more

President of ISPRS lan Dowman giving a speech at the Conference



ISPRS Workshop on Topographic Mapping from Space

(With Special Emphasis on Small Satellites) WG I/5 & I/6 Ankara, Turkey, February 14-16, 2006 By Ugur Murat Leloglu

Parallel to developments in space technologies, new sensors turn out to be available to mapping community, either active sensors (SAR, InSAR) or passive sensors with increasing spatial and spectral resolution. Besides, introduction of small satellites gives new opportunities and independencies, may decrease the cost of images taken from space and can lead to daily revisit capability. In addition to new sources of data, increasing use of the Internet, automation software and the international trend of integrating space systems have an impact on how geospatial information is produced, refined and updated. There are also questions about calibration, continuity, compatibility etc. of small satellite imagery, needs to be answered to foster widespread use.

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Secretary General of ISPRS, Orhan Altan is giving the opening speech



Report on the Workshop "3D Remote Sensing in Forestry"

Vienna, Austria, 14-15 February 2006 By Werner Schneider

The workshop "3D Remote Sensing in Forestry" was held in Vienna, Austria, on 14-15 February 2006. It aimed at dealing with all aspects of remote sensing in forestry where the 3-dimensional structure of forests is the object of study or is of major importance in the course of the analysis.

The event was initiated by the EARSeL Special Interest Group "Forestry" and co-sponsored by ISPRS WG VIII/11. The interest in this workshop exceeded all expectations. Seventy-seven papers were submitted. Forty-four were accepted for oral presentations and 27 for poster presentations. The number of participants had to be limited to 150 for organisational reasons.

VALE - Professor Dr. Karl Kraus by Orhan Altan

It is with deep regret that I announce the death of o.Univ. Prof. Dr.-Ing. Dr.h.c. Karl Kraus, Technische Universität Wien Austria, on 5 April 2006, following a heart attack, which he suffered while he was in Berlin at the Turkish

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The contributions to the workshop are published on the website <u>www.rali.boku.ac.at/3drsforestry.</u> <u>html</u>. Both full papers and slide presentations are available for most contributions. The selection of outstanding papers to be published in reviewed journals is still under way.



Scientific session

German Joint Geodetic Days.

Karl Kraus was born in Obermichelbach, Germany on April 23, 1939. He obtained his Dipl.-Ing. in geodetic science at the University of Technology, Munich in 1962, Dr.-Ing. (PhD) on photogrammetric block adjustment in 1966 and Habilitation in automation in geodetic science, at University of Stuttgart in 1972.

He was Assistant Professor at the Institute of Photogrammetry in Munich from 1968-1970, post doctoral researcher at the Institute for Photogrammetry in Stuttgart from 1970-1974, and Head of the Institute of Photogrammetry and Remote Sensing, University of Technology, Vienna Austria, from 1974 until his death. From 1985-1991 he was Head of the joint Research Program "Remote Sensing" of the Austrian Science Foundation: from 1983-1987 Dean of the Faculty of Engineering and Natural Sciences; and from 1987-1989, Rector of the Vienna University of Technology. In 1992 he was elected to the Council of the International Society for Photogrammetry and Remote Sensing (ISPRS) for the period 1992-1996 as Congress Director, and was responsible for the organisation of the very successful 1996 ISPRS Vienna Congress. From 1998 to 2001 he was Chairman of the Faculty of Engineering and Natural Sciences at the Vienna University of Technology.

Karl Kraus was presented with the Carl-Pulfrich-Award for introducing statistical methods of prediction into photogrammetry in 1971. In 1990 he was awarded an Honorary Doctor of the University of Technology, Budapest Hungary as well as the Wilhelm Exner Medal of the ''Österreichischer Gewerbeverein''. He published more than 170 scientific publications, 5 textbooks in Photogrammetry and Remote Sensing, some of which have been translated into several languages. He has been a member of the Editorial Board of the



Journals "Zeitschrift für Geo-Informations-Systeme" (September 1991 - December 1998), "Zeitschrift für Vermessung und Geoinformation", "Zeitschrift für Photogrammetrie-Fernerkundung-Geoinformation" (1997 – September 2002) and "ISPRS Journal of Photogrammetry and Remote Sensing" (until January 2005).

Karl Kraus was an outstanding teacher and researcher, and originator of many new developments in photogrammetry and remote sensing. He was a friend and strong defender of the traditions of ISPRS, which was established as ISP in Vienna in 1910, and he fought hard to ensure that its origins were always recognized. He was close colleague of many photogrammetrists and remote sensing experts around the world. He had the reputation of being a kind and considerate colleague and leader of a University Institute that was very highly respected internationally. His death is a sad loss to the photogrammetry and remote sensing community, his family, friends and colleagues.



5th Turkish German Joint Geodetic Days from March 28-3 I 2006 in Berlin

By Albert Wiedemann, Bsf Luftbild Gmbh. Berlin

The Turkish-German Joint Geodatic days took place the fifth times. They base on the close cooperation between the Technical University of Berlin (TUB) and the Istanbul Technical University (ITÜ). There have been about 160 participants from 16 countries.

The opening ceremony was dominated by a presentation from John Trinder, Australia, president of ISPRS and a reception in the Turkish House at the Urania in Berlin.

The meeting was partially with parallel sessions. Despite this fact and due to the numerous proposals some presentations have been moved to the poster sessions. Unfortunately some oral presentations omitted, because the speaker did not show up. If this happens with single lectures, this is not a problem. At this meeting it happened too often. I have the impression, that some of the missing presenters do not appreciate the auditorium, who pay a participation fee and spend time and money to participate to hear the presentations. Other interesting papers could not be taken into the program, because the slots have been occupied by lectures, who did not show up. The organizers are not responsible for this fact, they can not know who will use this great opportunity to present his work.

The program started with a plenary session on Wednesday morning, among them presentations from Prof. Altan on *Geoinformation for Disaster Management* and Prof. Kraus *Least Squares* Matching for Airborne Laser Scanner Data. He described a technology to improve the accuracy of lidar data. In the following sessions lectures to photogrammetry, remote sensing and GIS have been done sometimes parallel.

In the session on close range photogrammetry Suthau described methods to survey and model dinosaur skeletons and Külür spoke on An Automated System to Model Small Objects Using Structured Light.

The Friday started with a session on airborne photogrammetry. Wiedemann opened with *Combined Photogrammetric Flight with ALTM and Digital Camera.* In the presentation New Airborne Sensors and Platforms for Solving Experimental Applications in Photogrammetry and Remote Sensing by Kemper he showed alterative airborne sensor carriers (balloon, blimp, ultra light aircraft). On the calibration of line array cameras referred Kocaman in Self-Calibrating Triangulation of Airborne Linear Array CCD Cameras. Albertz presented The Generation of True Orthoimages – A New Approach. The session was closed by Wehr with CW-Laser-Scanning State-Of-The-Art AT INS and Future Multispectral Sensors.

Unfortunately the sessions on *Cultural Heritage* and *Computer Vision* have been parallel. In the Computer Vision session Läbe spoke on *Automatic Relative Orientation of Images* and Rodehorst in his presentation *Comparison and Evaluation of Feature Point Detectors* about interest operators.

In the final plenary session Jacobsen gave an overview Mapping From Space – A Cooperation of Zonguldak Karaelmas University and University of Hannover and Wählisch showed impressive images in Mapping of the Saturnian Satellites – Results From Cassini.

The meeting was embossed by the engagement of young people and is a good platform for their first public presentations. The organization was carried by the teams from ITÜ (Prof. Altan) and TUB (Prof. Albertz und Prof. Gründig).

The interesting and convenient meeting was sadly adumbrated by the heavy disease of Prof. Karl Kraus, who was transferred to the hospital immediately after his presentation, where he died a week later.

New Member Profile

GIS Center of Dubai Municipality

The Dubai GIS Center was created in February 2001, by Dubai Municipality, with the goal of creating a central repository of geographic information of the Emirate of Dubai that would provide spatial data and GIS related services to departments of Dubai Municipality, other government organizations of the Emirate and the private sector.

The Center conducts several GIS operations some of which are performed by the Photogrammetry and Remote Sensing Unit such as:

- Designing and Handling aerial-photography projects, LIDAR and remote sensing projects
- The guarantee of the quality of geographical information system and the surveillance of the projects development and the accuracy of the required data to all users.

Further details

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Beijing

Guilin – Best Under Heaven

By Chen Jun



Guilin is located in the northeast of Guangxi Zhuang Autonomous Region southwestern China, with a history of more than 2,000 years. The city proper covers 565 square kilometers. Over 600,000 people live in the city. Guilin is hailed by many as the most beautiful place in China and is one of the must-see destinations for most foreign tourists. According to a popular Chinese saying, "Guilin's scenery bests all others in the world." Its shapely-rising limestone towers and crystal-clear waters are often portrayed in Chinese artworks. Adding to its natural beauty are many fascinating caves.

Lijiang River

The Lijiang River is the most important part of Guilin's scenery. It generally means the water

way between Guilin and Yangshuo with 83 kilometers long. Along the Lijiang River, you can appreciate verdant - rolling hills, clear - running waters, mysterious caves and breath-taking cliffs. By a boat trip starting from Guilin, the first point of interest is the pagoda-capped Elephant Trunk Hill, long used as the symbol of Guilin. A little further downstream, the Pagoda Hill will be seen. Its hexagonal pagoda is called Longevity Buddha Pagoda and dates back to the Ming Dynasty (1368-1644). Then a series of beautiful scenes come into view, such as the Yearning-for-Husband's-Return Rock resembling a lady with her baby, the Crown Crag Hill with a big water eroded cave, which has various stalactites, stone pillars and rocks, the Picture Hill showing naturally-shaped images of nine horses in different positions, the Yellow Cloth Beach with the most beautiful water reflection of surrounding peaks, etc.. The cruise ends at the colorful market town of Yangshuo.

Elephant Trunk Hill

It is so named because of its resemblance to an elephant's sipping water from the Lijiang River with its trunk. The hill is on the western bank of the Lijiang River, 55 meters above the water, 108 meters in length and 100 meters in width. The cave between the "trunk" and the "body" is called "Moon-over-Water Cave". The sight is very representative of the landscape around Guilin. During sunset, the view is more attractive. Here is a legend about the hill. The Emperor of Heaven set out to conquer the Earth with his elephant. The elephant worked so hard to provide transport and finally got ill seriously. Some farmers saved his life. The elephant was very grateful and decided to stay on earth and help the farmers. The Emperor of Heaven was so angry. He thrust his sword into the elephant and turned the elephant into the rocky hill. A pagoda erected on top of the hill stands for the hilt of the sword.

Reed Flute Cave

It is the Guilin's largest and most impressive cave, formed 600,000 years ago by a underground river. Its name was derived from reed grass, which grew in front of the cave and was used for flutes. The highest part of the karst cave is 18 meters and the widest 93 meters. The cave's length is 2400 meters. Visitors can access to the first 500 meters' section. The cave, known as Art Palace of Nature, contains an overwhelming abundance of stalactites and stalagmites. Its internal lighting system uses colorful lights to emphasize the coincidental similarity of the rock formations to birds, plants, and animals. In the atmosphere of fairyland, you may enjoy your imagination and be amazed at the power of nature.

Fubo Hill



It is 62 meters above the water, I 20 meters long and 60 meters wide. Half of it stands in the river. "Fubo" in Chinese means "conquering waves". Since the galloping water is always blocked here and eddied, the hill is considered to have the power of subduing waves. Moreover, it was on

this hill that a temple in commemoration of one ancient general named Fubo was built in the Tang Dynasty (618-907), which gave rise to the name of Fubo Hill. Rocks and stalactites as well as a cloister and pavilions compose the fantastic and unique sight of the hill. At the foot of hill lie the Pearl-Returning Cave, the Thousand-Buddha Cave and the Sword-Testing Rock. A gracious cloister and a tearoom are on the southern slope. Halfway to the hill is the Pavilion of Listento-Waves. Stone steps wind up towards the hill top on the western slope. The Viewing Platform on the way is an ideal spot for seeing the panorama of Guilin city.

Yangshuo

Yangshuo is one of the Guilin's 12 counties. As an old saying goes , "Guilin's scenery is the most beautiful in the world, Yangshuo's scenery is the best in Guilin ". Yangshuo County covers an area of 1,428 square km. There are over 20,000 hills and over 250 scenic spots. The clean and clear Lijiang River runs through Yangshuo for 56 km. Picture Hill, Yellow Cloth Beach, Xingping Village, Lotus Cave, Young Scholar Hill, Snow Lion Ridge, Big Banyan Tree, Moon Hill, and Dragon River are in Yangshuo among the most famous scenic spots of Guilin. Old buildings and bridges amongst the hills and rivers tell visitors the 1000 years history of Yangshuo.

Guilin is also a good place for understanding many ethnic minorities of China. There are Zhuang, Yao, Hui, Miao, Mulao, Maonan and Dong etc.. Each minority has its own unique customs and festivals. In the picturesque surroundings, being with local people from different ethnic groups will be an exciting experience.

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Book Reviews

GeoDynamics. Atkinson, P.M., Foody, G.M., Darby, S.E., Wu, F. (eds), 2005, CRC Press.

By Prof. Brian G Lees, Australian Defence Force Academy Canberra ACT 2600, Australia

This text is not so much the compilation of a set of conference papers, but a well-selected group of papers from keynote speakers and special sessions at GeComputation 2003. As such, it rises well above the usu al run of post-conference publications and will earn its shelf space many times over.

Read more

Digital Terrain Modelling: Principles and Methodology, Li, Z., Zhu, Q. Gold, C., CRC Press. 2005.

By Dr Gamal H. Seedahmed, US. Dept. of Energy (DOE),

Digital Terrain Models (DTMs) are used, for instance, for orthophotos generation, 3-D city modeling, Flight simulation, and virtual battlefield training. Recently, Digital Earth (DE) (e.g., Microsoft Virtual Earth and Google's Earth) is being explored and implemented as an organizational framework for information about the Earth by allowing the users to interact, to search, and even to simulate over a virtual rendering of the planet. Hence, DTMs will become a critical enabler for several anticipated applications of DE, for example, visualization, and walk-through in mountainous areas that cover large regions or even continents.

Introduction to Geographic Information Systems (International Edition): K.T. Chang, McGraw-Hill, New York, 2006. Paperback, 432pp.

By Prof. Zhilin Li, Hong Kong Polytechnic University,

It can be found from the market that a number of GIS books are entitled "Introduction to Geographic Information Systems" or have similar titles. Most of such books provide the basic concepts, principles and operations of a geographic information system (GIS). It can also be found that some other books on GIS are very software-specific, such as "Inside ArcView GIS", "Inside Geomedia" and so on.

Read more

Geodemographics, GIS, and Neighborhood Targeting. Richard Harris, Peter Sleight, and Richard Webber. John Wiley and Sons, 2005

By Prof Bin Li, Department of Geography, Central Michigan University, Mount Pleasant, Michigan, USA.

This book is an overview on neighborhood targeting with geodemographics and GIS techniques. It established three related settings in this increasingly popular domain of neighborhood analysis. The historical and academic setting for geodemographics and GIS includes the urban geography traditions across the Atlantic and the relations between geodemographics and GIS, identified as the main tools for neighborhood targeting.

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