

ISPRS DAILY

The XXI Congress

The International Society
for Photogrammetry and Remote Sensing

3-11 July 2008 Beijing, China

Friday 04 July 2008

XXI ISPRS Congress - Official Opening

The XXI ISPRS Congress was officially declared open yesterday. The opening ceremony was chaired by Prof. Yang Kai, president of the Chinese Society of Geodesy, Photogrammetry and Cartography. Mr Lu Xinshe, vice-minister of Land Resources of China, director general of the State Bureau of Surveying and Mapping of China (SBSM) and Chairman of National Steering Committee for XXI ISPRS Congress, and Prof. Ian Dowman, president of the ISPRS, delivered opening addresses.

Following the ISPRS Congress tradition, a number of the awards will be presented throughout the Congress. Four awards were presented yesterday. The Brock Gold Medal Award was presented to Prof. Armin Gruen; the Otto von Gruber Award to Dr Matthias Butenuth; the U.V. Heleva Award to Martin Raubal, Stephan Winter, Sven Tessmann and Christian Gaisbauer; and the inaugural Wang Zhizhuo Award to Prof. Christopher Gold. Congratulations to all award recipients!

Prof. John Trinder and Prof. Armin Gruen became honorary members of the ISPRS. Congratulations!

A Chinese cultural show performed by students of Capital Normal University and the Accessory Intermediate Theatrical School of China Theatrical College concluded the opening ceremony.

A more detailed report of the opening ceremony will be featured in the next issue of ISPRS Daily.



Chinese Vice Premier met ISPRS council members



Chinese Vice Premier Li Keqiang met representatives of ISPRS Congress participants ISPRS council members and leaders of sister societies and national mapping agencies at Ziguangge, Zhongnanhai, before the opening of the Congress. The minister of Land and Resources Xu Shaoshi was also present at the meeting.

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Lu Xinshe Opens the Congress

"On behalf of the State Bureau of Surveying and Mapping of China (SBSM), I'd like to extend my warm congratulations to the opening of the congress and my sincere welcome to all the participants.

"On the eve of the Beijing Olympic Games, scientists from more than 80 countries and regions of the world are gathering in Beijing to attend the 21st ISPRS Congress where they will exchange the latest achievements in geospatial science and discuss new developments in photogrammetry and remote sensing. This is a significant contribution to the peaceful use of geospatial science and geographic information for the benefit of modern civilisation.

"Just before the opening of the congress, Chinese Vice-Premier Li Keqiang met some of the participants of the Congress on behalf of the Chinese government. He introduced the important role played by the geospatial sciences in China, especially during the earthquake relief effort in Wenchuan, and spoke about our ongoing efforts to promote the development of this science. He expressed the desire and resolution of the Chinese government to continue on the road of peaceful development. He also advocated the use of geospatial science to promote sustainable development and better serve the interests of humankind.

"In today's society, science and technology has been a major driving force in supporting economic developments and the growth of human civilisation. The development of photogrammetry and remote sensing allows the global community to better understand our environment, assist in disaster

management and more generally, improve our quality of life.

"Since the 1970s, when Chinese scientist Wang Zhizhou proposed the concept of full digital mapping, SBSM has been engaged in promoting the revolution of Chinese surveying and mapping technology. At present, digital surveying and mapping technology systems are being established in China. Basic national geographic information databases at 1:1,000,000, 1:250,000, and 1:50,000, and a number of provincial databases at 1:10,000, and city and county databases at larger scales have been established. SBSM is making efforts in the development of IT-based surveying and mapping systems, which are characterised by real-time acquisition, automatic processing, network services and socialised applications.

"In the rescue and response effort after the Wenchuan earthquake, SBSM swiftly built monitoring and data capture systems using aerial photography, satellites and low altitude platforms. Scientists captured and processed high resolution remote sensing imagery of the disaster-hit areas and integrated these with existing resources to produce orthographic maps and 3D GIS service systems.

"Altogether, around 53,000 maps and 11 terabytes of geographic information data were provided. This information is not only crucial for ongoing disaster assessment, relief and monitoring, but also site selection, sub-disaster monitoring, disaster prevention and infrastructure reconstruction. The international community showed their sympathy and provided generous support to the Chinese

government and people during the relief effort. I would like to express my heartfelt thanks to ISPRS council members and colleagues in the field of photogrammetry and remote sensing for their condolences and assistance.

"SBSM has always attached importance to international co-operation and collaboration in science and technology, and takes an active part in the activities of the ISPRS. We encourage fellow colleagues and professionals in the field of photogrammetry, remote sensing and geospatial science - both from home and abroad - to strongly support international co-operation. By promoting data sharing, expanding academic exchange and improving understanding and communication, together we can build a new silk road of information from imagery which will contribute to the peaceful interests of humankind and sustainable development.

"In one month, the 29th summer Olympic Games will be held in Beijing. 'One World, One Dream' is the slogan we put forward for the games. It is meant to carry forward the Olympic spirit of unity, friendship and peace, and promote the understanding and friendship of the people of all nations. Welcome to Beijing.

"I wish you a successful 21st ISPRS congress."

Lu Xinshe
Vice Minister,
Ministry of Land and Resources &
Director General,
State Bureau of Surveying and Mapping

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Promoting Harmony Through Science

ISPRS President Ian Dowman asked what science can do for society at the Congress opening ceremony.



"For those who have come here to recharge your batteries with new ideas for research and production, you should find plenty to provide that energy.

"At one end of the scale, Council is looking at ways in which ISPRS can react to global warming. We have had contacts with the World Business Council for Sustainable Development to advance this process.

"At the other end of the scale we all face a challenge: how to use our science to benefit society. The ISPRS tag line is information from imagery - we must live up to this. We must not only extract information, we must make sure that is used for the benefit of society.

"We should ask ourselves, here in Beijing: what have we done so far to benefit society? What can we do in the future?

"One thing is certain, we will be able to do more by collaborating with others. We must talk to scientists in other disciplines and tell them what imagery can do. Together, we can go to decision-makers and show them how science can help their society."

ISPRS Congress Featured in China Daily

China's English-language newspaper, China Daily, published a full-page special supplement on the XXI ISPRS Congress on page 16 yesterday.

The supplement describes the Congress as one of the most important events in the community of photogrammetry, remote sensing and spatial information sciences.

It profiles the global rise of the geographical information industry, its impact in China and how geospatial information has transformed the country's urban landscape.

"Photogrammetry and remote sensing have provided technical guarantee to the design and implementation of many engineering plans including South to North Water Diversion Project, West to East Power Transmission Project, West to East Natural Gas Transmission Project,

Qingtai-Tibet Railway, Three Gorges Project and projects for Digital City and Digital River," wrote Wang Ying, *China Daily* journalist.



The supplement also features a list of recent events in which photogrammetry and remote sensing have played a vital role.

Examples include the use of remote sensing in the discovery of dozens of ancient ruins, including the Yin Ruins in Henan province, the Hongshan cultural relics sites in Inner Mongolia.

Editorial Team

The local organising committee will publish eight issues of ISPRS Daily: Thursday, Friday, Saturday, Monday (7th July), Tuesday, Wednesday, Thursday and Friday. If you would like to contribute editorial, please submit material to Inga or Vienna no later than noon each day.

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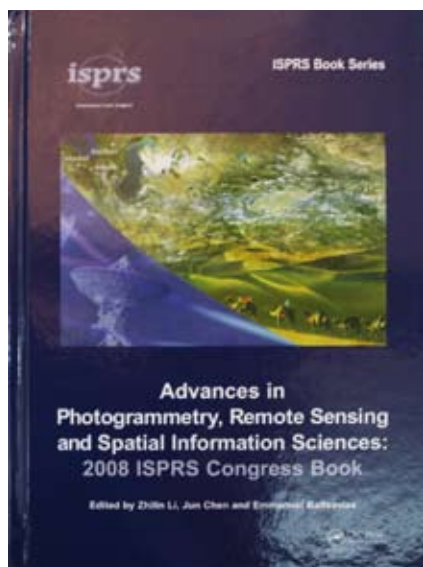
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3-11 July 2008 Beijing, China

Advances in Photogrammetry, Remote Sensing and Spatial Information Sciences: 2008 ISPRS Congress Book



Published on the occasion of the XXI Congress of the International Society for Photogrammetry and Remote Sensing (ISPRS) in Beijing, China, in 2008, *Advances in Photogrammetry, Remote Sensing and Spatial Information Sciences: 2008 ISPRS Congress Book* is a compilation of 34 contributions from 62 researchers active within the ISPRS. The book covers state-of-the-art developments in photogrammetry, remote sensing and spatial information sciences. It is divided into six parts:

- Introduction
- Sensors, Platforms and Data Acquisition Systems
- Data Processing and Analysis
- Data Modelling, Management and Visualisation
- Applications
- Education and Co-operation



Advances in Photogrammetry, Remote Sensing and Spatial Information Sciences: 2008 ISPRS Congress Book provides a comprehensive overview of the progress made in these areas since the XX ISPRS Congress held in 2004 in Istanbul, Turkey. The volume will be invaluable not only to scientists and researchers, but also university students and practitioners.

Photogrammetry and Remote Sensing in China



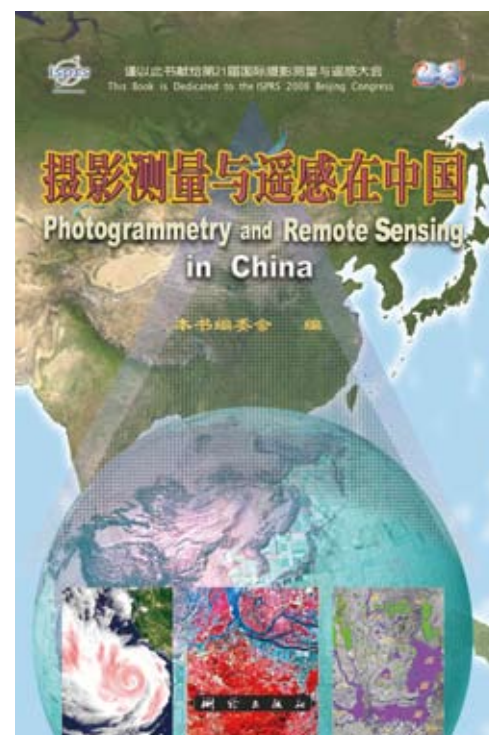
Since its reform and opening up to the world, China has made great progress in photogrammetry, remote sensing and spatial information science. It has made advancements in socio-economic development, resource investigation, environmental protection, disaster prevention and reduction, national security and living standards. China has also been active in academic exchange and international cooperation. The book provides an overview in both Chinese and English of the country's major achievements in this field.

This book has nine chapters. Chapter 1 introduces the long history of surveying and mapping. Chapter 2 summarises civil applications of air-borne and space-borne remote sensing systems for Earth observation. Chapter 3 describes key technological achievements in analytical photogrammetry, digital photogrammetry, remote sensing image processing, digital mapping and data updating. Chapter 4 presents the research on

spatial information science, such as multi-dimensional spatio-temporal data modelling, uncertainty in spatial data and analysis and GIS-based process analysis and simulation. Chapter 5 reviews key applications of photogrammetry and remote sensing in topographic mapping. Chapter 6 describes the industrialisation of mapping, remote sensing, GIS and satellite-based navigation.

An introduction is given to the scale, distribution, products, and services of photogrammetry and remote sensing. The education and international co-operation in this field are briefly summarised in Chapters 7 and 8. An outlook about the future developments in photogrammetry and remote sensing in China is given in Chapter 9.

This is a rich and informative book for domestic and foreign counterparts wanting to know about China's progress and accomplishments in peacefully applying spatial information technology.



If Walls Could Speak - Making Sense of the Future

Wouldn't it be great if walls could speak – or, at least, transmit information?

Imagine a world in which you could send information through the built environment around you. Apparently, this world is not so far away.

Steve Liang, from the Department of Geomatics Engineering at the University of Calgary, is researching the architecture and implications of sensor web – an information system that connects sensors.

"We have many, many sensors in the world today; in the future, there will be even more, from large sensors such as satellites to small matchbox sensors," says Liang.

"At the moment, each matchbox sensor costs about a hundred US dollars, but the prediction is that, very soon, each one will cost less than five US dollars," he continues.

"The vision is that we will be able to spread these sensors all over the environment and sense information almost on demand."

The significance of this becomes more obvious when we consider the wealth of information only humans can collect. Liang calls this information 'volunteered geospatial information'.

"What we are now seeing is the contribution of 'human' or 'citizen sensors' to the geospatial information web," says Liang.

"This contribution is essential because the information contributed by human sensors is very difficult for other sensors to collect."

Infrastructure maintenance is a key area in which the sensor web has the potential to significantly improve living standards and the delivery of services.

"Citizens can report, for example, that a washroom is not working. If 200 people report the same information, this information gains importance. That's when we know it should be acted on. And this is just a simple example."

Liang says that many governments around the world have begun to realise the power and importance of sensor web. The result is an influx of funding into the field.

"We are integrating more and more sensors into our existing infrastructure. In the future, sensors could be set up almost everywhere so people all over the world can contribute to a common spatial information infrastructure," he says.

"There are even research projects that are investigating the idea of putting sensors into building materials."

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The most profound
technologies
are those that
disappear. They
weave themselves
into everyday
life until they are
indistinguishable
from it.

- Mark Weiser

What's on the Menu

5 July 2008 - Saturday

◆ YF-Opening Ceremony

Time: 08:30-10:00

Room: (305C Conference Room)

◆ YF-White Elephant Session

Time: 14:00-15:30

Room: (305C Conference Room)

◆ YF-Student Consortium Assembly

Time: 17:00-17:50

Room: (305 Conference Room)

◆ YF-Closing and Award Ceremony (YF Best Papers and Posters)

Time: 17:00-18:00

Room: (305 Conference Room)

◆ SE-5: Beijing Night Show

Date: Saturday, 5 July 2008

Wednesday, 9 July 2008

Time: 19:00-21:20

Depart from BICC at 18:00

Place: Beijing Night Show Theatre

Cost: RMB 750



Enjoying the Congress?
Purchase your raffle tickets
to support future ISPRS
activities. Raffle tickets
are on sale at the TIF
Registration Booth on BICC
Level 1.

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Program of the Day

- ◆ **Plenary Session 1 (PTS-1)**
Time: 08:30-10:00
Room: (Convention Hall No.1)
- ◆ **TS WG I/2 (1): SAR Applications**
Time: 10:30-12:00
Room: (Convention Hall No.2A)
- ◆ **TS SS-4: Modern Navigation and Earth Observation**
Time: 10:30-12:00
Room: (Convention Hall No.2B)
- ◆ **TS WG V/1 (1): Industrial Vision Metrology-Calibration & Verification**
Time: 10:30-12:00
Room: (Convention Hall No.2C)
- ◆ **TS SS-1: Operation and International Coordination for Earth Observing Systems**
Time: 10:30-12:00
Room: (201A Conference Room)
- ◆ **TS WG VII/2 (1): Information Extraction from SAR Data**
Time: 10:30-12:00
Room: (201B Conference Room)
- ◆ **TS WG II/1 (1): Spatio-temporal Modelling**
Time: 10:30-12:00
Room: (305C Conference Room)
- ◆ **TS ThS-5: Component-Based GIS**
Time: 10:30-12:00
Room: (305B Conference Room)
- ◆ **TS WG VI/1: Educational Frameworks and Methodologies**
Time: 10:30-12:00
Room: (307 Conference Room)
- ◆ **Poster Session**
Time: 13:30-15:30
- ◆ **TS WG III/1: Automatic Orientation Methods**
Time: 16:00-17:30
Room: (Convention Hall No.2A)
- ◆ **TS ThS-1: Sensor Networks and Homeland Security**
Time: 16:00-17:30
Room: (Convention Hall No.2B)
- ◆ **TS SS-14: Digital Olympics**
Time: 16:00-17:30
Room: (Convention Hall No.2C)
- ◆ **TS WG VII/6(1): Remote Sensing Data Fusion**
Time: 16:00-17:30
Room: (201A Conference Room)
- ◆ **TS WG VII/1: Fundamental Physics and Modelling**
Time: 16:00-17:30
Room: (201B Conference Room)
- ◆ **TS WG IV/1(1): Spatial Data Infrastructure**
Time: 16:00-17:30
Room: (305C Conference Room)
- ◆ **TS SS-11: CARTOSAT-SAP**
Time: 16:00-17:30
Room: (305B Conference Room)
- ◆ **TS WG IV/7: Extraterrestrial Mapping**
Time: 16:00-17:30
Room: (307 Conference Room)
- ◆ **Workshop 5 (WS-5): Elsevier Workshop on How to Write Good Journal Papers**
Time: 16:00-17:30
Room: (Convention Hall No.2A)

Data Availability – a Common Problem

Scientists striving to produce more with less are hampered by a lack of available data.

Scientists and practitioners meeting in ISPRS tutorials yesterday cited data availability as a key issue across the geospatial information sciences.

The pressure to downsize in many national mapping agencies, compounded by growing demand for advanced and ad-hoc data production, is pushing many in the field to streamline production processes and use available data more efficiently.

"We need to take advantage of available technology to be able to produce more with less resources," says Mark Cygen of ESRI US. "Practitioners are using automated processes, delivering data and services through the web and reducing internal cost. E-government, for example, also maximises the visibility and availability of spatial information to the general public."

"Data availability is one of the key challenges in the field," said Karsten Jacobsen from the University of Hannover. "With free data accessibility, we can generate data for any part of the world, without the limitations of local technique." Jacobsen presented his work in the tutorial, *Information Extraction from High Resolution Optical Satellite Sensor*.

In a parallel tutorial, *GIS Updating from Imagery and Collateral Data Sources*, participants also considered innovative approaches to make data free, economical and available. "Data availability is a common challenge faced by national mapping agencies," said Christian Heipke, also from the University of Hannover.



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Souvenirs and Books are Available at Booth 112



Souvenirs and Books



Peking Opera

Peking Opera has entertained Beijingers for over 200 years with its elaborate costumes, dulcet arias, dazzling martial arts and musical dialogues. They are usually based on folk tales, famous novels and fairy tales. The theater has a subtitle message board in English and Chinese.



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Food & Fun at the Welcome Reception

