



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

# ISPRS AWARDS

## BEIJING, CHINA

### JULY 2008





# CITATIONS

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<sup>1</sup> Awards for the best posters will be decided at the Congress.

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<sup>3</sup> The 2 best papers and 3 best posters from the Youth Forum will be presented at the Closing Ceremony of the Youth Forum on 5 July.



## The Brock Gold Medal Award

**The Brock Gold Medal Award** is donated by the American Society for Photogrammetry and Remote Sensing, and is awarded for an outstanding landmark contribution in the evolution of the photogrammetry, remote sensing and spatial information sciences, which is a proven contribution to these sciences and technologies of whatever form, whether a major completed project or program, some fundamentally new equipment, system or fundamentally new technique, or other new departure. The winner is Armin Grün (Switzerland).

**Professor Armin Grün** has been Professor and Head of the Chair of Photogrammetry and Remote Sensing at the Institute of Geodesy and Photogrammetry, Federal Institute of Technology (ETH) in Zurich, Switzerland since 1984. He played a major role in the development of bundle adjustment based on a sophisticated self-calibration method in the 1970s. In the early 1980s, he developed a method for adaptive multiple image matching, which is implemented today in a number of commercial and research oriented photogrammetric data processing systems around the world. Since 1984, his group developed the Digital Image Photogrammetric Station (DIPS), which successfully integrated bundle adjustment, image matching methods, automatic point tracking and surface generation. His research in the 1990s, resulted in a software product for automated 3D city model generation, manipulation and visualisation called CC-Modeller.

Armin Grün has applied his expertise to documenting historical sites and thus making Photogrammetry better known and more popular. The most significant success certainly was the documentation and virtual reconstruction of the Great Buddha of Bamiyan in Afghanistan. This work has created world-wide media interest and coverage in the press and on television. Other examples include his work on the Nasca monuments in Peru and on the visualisation of Mt. Everest.

Armin Grün has served on a number of national and international scientific organisations. Within ISPRS he was president of Commission V during 1988-1992, 2nd Vice President during 1992-1996, Chair of the Financial Committee during 1996-2000, and has been Chair of the International Scientific Advisory Committee since 2000.

## The Otto von Gruber Award

**The Otto von Gruber Award**, which is donated by International Institute for Geo-Information Science and Earth Observation (ITC), consists of a medal and a monetary grant, and is presented to the author, under 40 years of age, of a paper of outstanding merit in the photogrammetry, remote sensing and spatial information sciences over the 4 years prior to the Congress. The winner of the award is Matthias Butenuth (Germany).

**Dr Matthias Butenuth** is a very capable young scientist who obtained his PhD degree from Leibniz Universität Hannover, Germany, and is currently working at the Technical University Munich. He has developed a new method of active contour models for image segmentation called network snakes, which was firstly presented at the ISPRS Symposium of Commission III, Photogrammetric Computer Vision 2006 and published in the peer-reviewed journal "Photogrammetrie Fernerkundung Geoinformation", 2007. His research defines a new mathematical model, which incorporates topology to the concept of parametric active contours to enable the optimisation of networks or the boundaries of adjacent objects. Moreover, the introduced topology is exploited during the energy minimization process to enable superior results compared to traditional active contours.

In addition, the transferability of his new method of network snakes is an important contribution to innovative applications. The potential and applicability of the method is emphasized by two publications on different examples from the geosciences and the bio-medical sectors. Firstly, the delineation of field boundaries from remotely sensed imagery applying network snakes is presented jointly with colleagues in a comprehensive framework of data integration, published in the "ISPRS Journal of Photogrammetry & Remote Sensing", 2007. The second example delineates biological cells from microscopic cell imagery using network snakes presented jointly with a colleague in a peer-reviewed paper published in the "Bildverarbeitung für die Medizin 2007".

## The U.V. Helava Award

**The U.V. Helava Award**, sponsored by Elsevier B.V. and Leica ERDAS, was established to encourage and stimulate submission of high quality scientific papers by individual authors or groups to the ISPRS Journal of Photogrammetry and Remote Sensing, 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 consists of a monetary grant of SFr. 10,000, a certificate and a silver plaque, partly funded by the Institute of Photogrammetry and Remote Sensing, Helsinki University of Technology (the University where Helava studied). The plaque was designed by the 1980-1988 ISPRS Technical Commission III President, Einari Kilpelä, previously Professor at the Helsinki University of Technology.

A five-member jury, comprising experts of high scientific standing, whose expertise covers the main topics included in the scope of the Journal, evaluated 121 papers for the period 2004-2007. For each year of the four-year evaluation period, the Best Paper was selected and has been announced in the ISPRS Journal, ISPRS Highlights, the ISPRS page in GIM, and on the websites of ISPRS and Elsevier. The paper receiving the U.V. Helava Award was selected from these four papers. It was published in Vol. 62 (2007), **by Martin Raubal, Stephan Winter, Sven Tessmann, and Christian Gaisbauer** entitled "Time geography for ad-hoc shared-ride trip planning in mobile geosensor networks".

The jury stated that the paper provides an excellent discussion of a simulation model for shared-ride trip planning. It is very interesting to read and provides a good overview on the usage of agents for trip planning. The theory development is solid. The authors demonstrated their proposed system with a real street network, confirming their theoretical results.

## The Wang Zhizhuo Award

**The Wang Zhizhuo Award** is sponsored by the Chinese Society of Geodesy, Photogrammetry and Cartography (CSGPC) and consists of a certificate and a monetary grant (SFr. 2,500). It will be granted at each quadrennial ISPRS Congress to a person who has made significant achievement or innovation in the spatial information sciences. The winner of the Award is Christopher M. Gold (United Kingdom). It will be awarded for the first time at the 21st ISPRS Congress in Beijing.

**Professor Christopher Gold** has been active for over 30 years in the development of spatial data structures, spatial models of perception and adjacency, Geo-informatics applications, and algorithms. He has approximately 200 publications and presentations in many fields – Geographic Information Science (GIS), Computer Science, Geology, Forestry and others and has collaborated with many researchers in Europe, North America and Asia. He is known in the Geo-informatics community for his work on spatial data structures, Voronoi diagrams, dynamic mapping and 3D modelling. He is known within the Computational Geometry community for his work on GIS applications. He has been active in Mathematics conferences, in Geology and Engineering workshops, and in Forestry. He has made presentations or organized workshops in Canada, USA, Europe and China and has received a variety of honours from Canadian and Asian associations,.

From September 2004 to August 2007, Professor Gold held the post of “EU Marie Curie Chair in GIS” with the GIS Research Group at the University of Glamorgan, UK. These professorial appointments are a mechanism to highlight personal achievements of world-class researchers by offering them top-level appointments in Europe, to support career development and international recognition. His chair duties included organizing European and international conferences and workshops on spatial data visualization, and he travelled extensively giving seminars and workshops. His 30 years of research and many publications have been devoted to the development of appropriate spatial models for various aspects of GIS, and his work in promoting Voronoi diagrams as a fundamental tool for spatial analysis has been widely recognised and used.



## ISPRS Honorary Member

An individual is elected as a Honorary Member in recognition of distinguished services to the ISPRS and its aims. Honorary Members shall be nominated by a committee, chaired by the most recent Honorary Member and composed of members from the current and three previous Councils, and elected by the Congress. There may not be more than ten living Honorary Members of the Society at any given time. The Committee has nominated John Trinder (Australia) and Armin Grün (Switzerland) for election as Honorary Members of ISPRS.

**Professor John Trinder** has played a major role in the scientific and administrative activities of ISPRS over a period of more than 30 years. From as early as 1972, John became involved in ISPRS WG activities through Working Group VI/1 on Education and Research in the Oceania region and subsequently in 1976-1980 as a member of WG1/1. He became President of Commission I - Primary Data Acquisition from 1980-1984, Second Vice President from 1984-1988, Chair of the Financial Commission 1991-1992 and from 1992, he has taken leading roles in the administration of ISPRS as Treasurer, Secretary General, President and finally as First Vice President. He has served ISPRS as Commission President and in various Council positions for a total of 24 years.

During his period as President John Trinder led the revision of the structure of the Technical Commissions and their terms of reference, including introducing an eighth Commission, the first time the number of Commissions had been changed in ISPRS for 52 years. He also registered ISPRS as a not-for-profit corporation in Maryland USA, thus formalizing the legal status of the Society.

John Trinder has won a number of awards including the Grand Trophy of Talbert Abrams Award of American Society for Photogrammetry and Remote Sensing on two occasions, the James Kirkwood Curdie Prize awarded by the Institution of Surveyors, NSW Division (Australia), "For His Forward Looking Approach to the Future of Our Profession" in 1998 and the Eminent Persons Award from the Spatial Sciences Institute of Australia in 2004.

**Professor Armin Grün** has been recognised for his scientific work with the award of the Brock Gold Medal (see page 3). He is awarded Honorary Membership for his scientific leadership over many years, contributing to the aims of ISPRS and for his work on ISPRS Working Groups, Commissions,

Council and Committees over a period of 24 years. Armin served on a number of national and international scientific organisations. His major appointments were President of Commission V during 1988-1992, 2nd Vice President during 1992-1996, Chair of the Financial Committee during 1996-2000, and Chair of the International Scientific Advisory Committee since 2000.

His world-wide reputation earned him a number of very prestigious awards, including the Otto-von-Gruber Award (ISPRS, 1980), the Talbert Abrams Grand Trophy (ASPRS, 1985 and 1996), the Fairchild Award (ASPRS, 1995) and the U.V. Helava Award (ISPRS, 2000). He is an Honorary Member, Japanese Society for Photogrammetry and Remote Sensing, a Corresponding Member, German Geodetic Commission (DGK), and an Honorary Professor of Wuhan University and of Yunnan Normal University in Kunming.

## The Gino Cassinis Award

**The Gino Cassinis Award** was established by the Italian Society for Surveying and Photogrammetry (SIFET) in honour of Professor Gino Cassinis, who was a teacher of Applied Mathematics, Geodesy and Photogrammetry at the University of Pisa and at the Technical University (TU) of Milan, Italy. It consists of a certificate and SFr. 2,500. The recipient shall be a person who has significantly enhanced the mathematical and statistical foundations of the photogrammetry, remote sensing or spatial information sciences in the 4 years preceding the Congress. The winner of the award is Zhilin Li (China).

**Dr. Zhilin Li** is Professor in the Department of Land Surveying and Geo-Informatics, The Hong Kong Polytechnic University. He has recently authored a book titled “Algorithmic Foundation of Multi-scale Spatial Representation”, published in 2007 by CRC Press (Taylor & Francis Group). This book lays down an excellent mathematical/algorithmic foundation for multi-scale representation and digital map generalization.

Whilst previous classic textbooks appear not to provide a sufficient number of operations (or transformation models) for multi-scale representation, Li (2007) carried out a systematic study and has differentiated six groups with a total of 39 operations. These six groups are: individual point features; a set of point features; individual line features; a set of line features; individual area features; and a set of area features. After the appropriate operations have been identified, Li has made at least one generalization algorithm available for each of them. All algorithms for these operations together form a mathematical foundation for digital map generalization. The algorithms can be stored as subroutines and can be employed whenever there is a need. This provides a set of “graphical transformations” in some sense equivalent to a library of map projections. This is a significant contribution to the field, and worthy of acknowledgement.

## The Eduard Dolezal Award

**The Eduard Dolezal Award** is donated by the Austrian Society for Surveying and Geoinformation to assist individuals or representatives of institutions from developing or reform countries to participate in the ISPRS Congress. The winner is Nguyen Dinh Duong (Vietnam).

**Dr. Nguyen Dinh Duong** is Director of the Department of Environmental Information Study and Analysis in the Institute of Geography, Vietnamese Academy of Science and Technology. Dr. Duong has been very active in developing remote sensing methodologies not only in Vietnam but also in Asian region.

He developed the WinASEAN (Windows based Advanced System for Environmental Analysis with Remote Sensing Data) under financial support of NASDA (currently JAXA) and technical assistance of RESTEC Japan. The software has been used from 1993 to 2000 for hands-on training in the annual Regional Seminar: Earth Observation for Tropical Ecosystem Management organized by NASDA, RESTEC and UN ESCAP. The WinASAEN software is popular in remote sensing research and education in many countries in Asia. The WinASAEN has twice won the Silver Prize in CATCON organized by the ISPRS Commission VI in Vienna 1996 and Tokyo in 2006.

In 2005, Dr. Nguyen Dinh Duong was a key person in the successful organisation of the 26th Asian Conference on Remote Sensing (ACRS) held in Hanoi, Vietnam with more than 600 participants including many from overseas. He has been a local facilitator for Japan International Cooperation Agency (JICA) NET Distance Education on Remote Sensing and GIS since 2005. His contribution to this course for developing countries is highly appreciated by JICA.

Dr. Nguyen Dinh Duong is the leader of the National Project: Monitoring Oil Pollution in the Vietnamese and East Sea (2007-2010). He is the author of more than 100 papers about classification of land cover, natural resources management, and environmental monitoring published in national and international journals, ACRS proceedings and other publications.

## The Schwidefsky Medal

**The Schwidefsky Medal** is sponsored by Deutsche Gesellschaft für Photogrammetrie und Fernerkundung (DGPF), in memory of Professor Dr. rer. techn. Dr.-Ing.e.h. Kurt Schwidefsky, Honorary Member of the ISPRS. The Award is in the form of a medal made of porcelain. The recipients shall be persons who have made significant contributions to photogrammetry and remote sensing, either through the medium of publication as author or editor, or in another form. The Schwidefsky Medal is awarded to Gerhard Kemper (Germany) and Klaus Szangolies (Germany).

**Dr. Gerhard Kemper** is a very active contributor to the outreach activities of ISPRS. Since 2001 he has assisted in many organisational activities as well as making scientific contributions. He assisted ISPRS to participate in the Intergeo exhibition 2002 in Frankfurt and in 2003 in Hamburg. He provided significant assistance in the preparations for the ISPRS 20th Congress in Istanbul, 2004, helping with the layout of flyers and preparation of several short video-animations for attracting potential guests to the Congress. He also made a major contribution in preparing the video shown at the Opening Ceremony at the ISPRS Congress. After the Congress in Istanbul, 2004, Gerhard Kemper continued his work for ISPRS at the Intergeo exhibitions in Düsseldorf 2005, Munich 2006, and Leipzig 2007. He did much of the work on the production of the Video-DVD "ISPRS: Its Work and Organisation", in 2005, and the ISPRS Prospectus "Spatial solutions for the benefit of our society in a rapidly changing world" in 2006.

**Professor Klaus Szangolies** has worked as Editor-in-Chief for the German journal for photogrammetry, remote sensing and geoinformation (PFG) for more than 10 years. Within this period he has turned the journal into the most important journal in the German-speaking world in the areas of photogrammetry, remote sensing and geoinformation. He has implemented a double blind review system and he has personally supervised each individual article both in terms of editorial issues and technical content. He has also established a network of well known reviewers and authors that forms a competent and interdisciplinary basis for the future. There is no doubt that the PFG would not be regarded as a high level technical publication without the engagement of Klaus Szangolies.

## The Willem Schermerhorn Award

**The Willem Schermerhorn Award**, sponsored by Geo-Information Netherlands (GIN), has been awarded to Sisi Zlatanova (Netherlands) in recognition of her excellent performance as Chair of ISPRS working group IV/8: Spatial Data Integration for Emergency Services.

**Dr. Sisi Zlatanova** has organized three international symposiums on the theme Geoinformation for Disaster Management (Gi4DM), as an ISPRS activity. These were held in Delft, Netherlands; Goa, India and Toronto, Canada during March 2005, September 2006, and May 2007 respectively. The papers presented during the first and third Gi4DM have already been published as books “Geoinformation for Disaster Management” and “Geomatics Solutions for Disaster Management” by Springer. The papers from the 2nd Gi4DM are being prepared for publication. The fourth Gi4DM has already been scheduled to be held in China during August 2008.

Sisi Zlatanova has also edited ISPRS Book Series No.6 “Geospatial Technology for Emergency Response”. She had made important contributions to organizing ISPRS TC IV Symposium in 2006 and ISPRS 21st Congress in Beijing. Her activities related to integration of Geospatial data have significantly assisted the advancement of knowledge in this field and facilitated implementation of the Istanbul Congress resolutions.

Dr. Zlatanova is an Associate Professor at Delft University of Technology and holds a PhD degree in 3D GIS for urban modelling from Graz University of Technology.

## The Samuel Gamble Award (CIG)

**The Samuel Gamble Award** is sponsored by the Canadian Institute of Geomatics in honour of Dr. Samuel G. Gamble, former President of ISPRS, and Director of the 1972 Congress. A recipient of the award shall be a person who, like Dr. Gamble, has contributed significantly to the development, organization or professional activities of the photogrammetry, remote sensing and spatial information sciences, at the national or international level. The winners of the Award are Wilber K. Ottichilo (Kenya), Jide Kufoniya (Nigeria) and Li Deren (China).

**Dr. Wilber Ottichilo** is the Director General of the Regional Centre for Mapping of Resources for Development (RCMRD), based in Nairobi, Kenya. He has over 20 years of working experience in natural resources assessment and management, environmental conservation, land use mapping and planning, environmental impact assessment, proposal development, monitoring and evaluation. RCMRD is a regional member of ISPRS and Dr. Ottichilo has been an active participant in ISPRS affairs in Africa and is a member of the AFREF Steering Committee, Chair of the Board of EIS Africa, a member of UNEDRA and of the UNECA GEO Committee of CODI.

**Dr. Jide Kufoniya** is Executive Director of the Regional Centre for Training in Aerospace Surveys (RECTAS), based in Ile-Ife, Nigeria since 2000. He has led the Centre to present courses in English and French and works closely with ITC in developing collaborative courses. He is Secretary General of the Africa Association of Remote Sensing of the Environment (AARSE), a member of the AFREF Steering Committee and is heavily involved in the UN Economic Commission for Africa. He is chair of ISPRS WG VII/7: Innovative Problem Solving Methodologies for Less Developed Countries and regional representative of the WG VI/3 – International Cooperation and Capacity Building. In Nigeria, he works within the Nigerian Institute of Surveyors as Chair of the Technical Committee and is Editor-in-Chief of the Journal of Surveying and Geoinformatics.

**Professor Li Deren** is an outstanding researcher, educator and activist in photogrammetry, remote sensing and geo-information technology. His work has emphasised the importance of international collaboration. He has made a significant contribution to the scientific development and industrialization of geoinformation technology in China and to the education of surveying and mapping in general. Internationally he has served for the ISPRS for

eight years as the President of Commission III (Theory and Algorithms) and President of Commissions VI (Education). He was the President of Wuhan Technical University of Surveying and Mapping (WTUSM) and the President of Chinese Society of Geodesy, Photogrammetry and Cartography (CSGPC). He is currently the Chairman of the Academic Commission of the State Key Laboratory for Information Engineering in Surveying and Mapping and Remote Sensing (LIESMARS). He was also the Co-Chairman of CEOS (2003-2004). Dr. Li has paid much attention to international collaboration in the ISPRS fields. Since 1985, he has accumulatively invited a total of 50 experts to give lectures in Wuhan University (formerly WTUSM). The list includes presidents of ISPRS, presidents of IUGG, presidents of ICA, and many more. In respect to the international cooperation and the cooperation among universities, with assistance from Dr. Li Deren, Wuhan University has signed up cooperation agreements with more than ten universities from the United States, United Kingdom, Germany, France, Switzerland, Holland, Japan and Thailand.



## President's Citation

### Commission I

**Karsten Jacobsen** for his contribution as chairman of WG I/5 "Geometric modelling of optical spaceborne sensors and DEM generation", particularly for organising meetings and reporting on working group activities.

### Commission II

**Monika Sester** for the integrative role she has played between the spatial information sciences, photogrammetry and remote sensing in the four years of her term as chair of WG II/3 "Multiple representations of image and vector data".

### Commission III

**Juha Hyypä** for his active co-chairing of WG III/3 "Processing of point clouds from laser scanners and other sensors", including coordinating a test on the extraction of tree information, with EuroSDR, and the organisation of a very successful ISPRS workshop on Laser Scanning.

**Volker Roderhorst** for his work in WG III/2 in establishing an excellent benchmark data set for surface reconstruction with shape from X methods including the provision of data and initiating discussions on the methods and results.

### Commission IV

**Christian Heipke** has contributed to the advancement of science as chair of WG IV/3, "Automated geo-spatial data acquisition and mapping". He has organised meetings and edited a theme issue of the ISPRS Journal on Digital Aerial Cameras.

### Commission V

**Derek Lichti and Norbert Pfeiffer** as chairs of WG V/3 "Terrestrial Laserscanning" who have delivered an outstanding contribution to the work of ISPRS. Their working group has had a great impact on the discipline through their contribution to providing test data, organising meetings and contribution to international standards.

**Commission VI**

**Mojca Fras** has chaired WG VI/5 “Promotion of the profession to students”, and successfully organized the Second Summer School in Ljubljana in 2007. She has also worked hard on activating the Student Consortium and contributed on the issue of Student Consortium Newsletter.

**Commission VII**

**Zhang Jixian** has Chaired WG VII/6 “Remote Sensing Data Fusion”. He organized two large international meetings in 2005 and 2007, with support from others such as IEEE.

**Commission VIII**

**Piero Boccardo** has fulfilled his duties as the Chair of WG VIII/2 “Hazards, disasters and public health” in an admirable fashion showing dedication and initiative.

**Amelia Budge**, who, as Co-chair of WG VIII/2, acted as a de-facto WG Chair for Public Health, worked in an energetic, diligent and creative way.

## **The ISPRS Prizes for Best Papers by Young Authors**

The prizes for Best Papers by Young Authors, are sponsored by donor organizations and by ISPRS to authors who are less than 35 years old and are the sole author of a high quality paper presented at the Congress. In 2008 awards have been sponsored by ISPRS, Dr. Sherman Wu and the European Science Foundation.

### **ISPRS Best Papers by Young Authors Awards**

Marta Blazquez, Spain

David Belton, Australia

Margarita Kokla, Greece

Francesco Dell'Endice, Switzerland

Min Deng, Hong Kong, China

Long-qi Zhang, China

Sander Oude Elberink, Netherlands

Yuan Li, China

Pengfeng Xiao, China

### **Sherman Wu Award (Managed by The ISPRS Foundation)**

Yunhang Chen, USA

### **European Science Foundation Awards**

Hai Huang, Germany

Zhenhong Li, UK

Pauline Miller, UK

Sergey Korkin, Russian Federation

Margarita Rova, UK

Thomas Hanusch, Switzerland

## **Best Papers at Youth Forum**

The two best papers at the Youth Forum have been selected from the papers of the Youth Forum Technical Sessions. The Youth Forum Best Paper award consists of a certificate and a monetary grant (SFr. 1000) sponsored by Leica Geosystems, Switzerland and will be presented for the first time at the Beijing Congress. The winners are:

Yunsheng Wang, Holger Weinacker, Barbara Koch (Germany), Krzysztof Sterenczak (Poland)

Hannes Püschel, Martin Sauerbier, Henri Eisenbeiss (Switzerland)

