

The XIX ISPRS Congress: Awards and Citations

Brock Gold Medal Award

The Brock Gold Medal Award shall be awarded to the person who has made an outstanding landmark contribution in the evolution of the photogrammetry, remote sensing and spatial information sciences. It shall be a proven contribution to these sciences and technologies, whether a major completed project or program, some fundamentally new equipment, system or fundamentally new technique, or other new departure.

Jack Dangermond was chosen because he is the recognised leader in the international adoption and advancement of technologies for processing, analysis and management of geo-spatial information systems for applications which benefit all sectors of both public and private communities. The effects of these developments are increasingly impacting on almost all aspects of human activity, leading to more efficient management and applications of information that has a spatial component. These achievements are in particular leading to significant improvements in the management of the Earth's scarce resources. ISPRS recognises him for his constant dedication to advancing the geo-spatial technologies. These advancements are truly landmark achievements in the sciences and technologies represented by the ISPRS.

Mr. Dangermond has over twenty-five years of experience in developing GISs for multi-agency data management. He is the founder and president of ESRI, a Redlands, California-based firm that has been at the forefront of the GIS field since 1969. ESRI is generally acknowledged as the technical and market leader in GIS software and custom turnkey systems. ESRI has the largest GIS software install base in the world with more than 200,000 systems on PCs, workstations, and computer networks. Mr. Dangermond is recognised in both academia and industry as a leader of and an authority on the GIS field. He personally managed many of ESRI's early projects and remains active in project overview in addition to handling client relations and managing overall company activities.

Mr. Dangermond graduated with a B.S. in environmental science from California Polytechnic College, Pomona, California; an M.S. in urban planning from the Institute of Technology at the University of Minnesota; and an M.S. in landscape architecture from the Graduate School of Design, Harvard University, where he worked in the Laboratory for Computer Graphics and Spatial Design. During the first fifteen years of his career, Mr. Dangermond worked on dozens of significant projects in the areas of developing and applying GIS technology. Early efforts included developing environmental and



Jack Dangermond receiving the Brock Gold Medal Award from A. Mikuni.

landscape assessment for regional planning, studies in methodology for transmission line and power plant siting, and new town planning.

Mr. Dangermond has been the recipient of numerous fellowships, grants, and awards including the Cullum Geographical Medal of Distinction from the American Geographical Society, the EDUCAUSE Medal of EduCause, the Urban and Regional Information Systems Association (URISA) Horwood Award "for outstanding contributions to the information systems field," and the Association of American Geographers (AAG) Honorary Membership, presented to individuals who have made exemplary contributions to geography. He is a member of many professional organisations and has served on advisory committees for such U.S. agencies including NASA's Science and Technology Advisory Committee, the EPA, the National Academy of Sciences, the National Science Foundation, and NCGIA. He delivers keynote addresses at various meetings and conferences around the globe.

Mr. Dangermond has authored hundreds of papers dealing with GIS technology, which were published in journals and conference proceedings in such diverse fields as photogrammetry, computer science planning, environmental science, and cartography.

The Otto Von Gruber Award

The Otto Von Gruber Award is presented every four years to the author of a paper of outstanding merit on photogrammetry, photo-interpretation or remote sensing. The paper shall be written within the four years immediately preceding the year of the Congress of the International Society for Photogrammetry and Remote Sensing (ISPRS) at which the Award is to be presented.

The applicant should not be older than 40 years on the opening day of the Congress and should have specialised in his/her studies in the areas of photogrammetry, photo-interpretation or remote sensing as a major subject.

The jury shall be composed as follows:

The President of ISPRS

Three qualified individuals from:

- The Council of the Deutsche Gesellschaft für Photogrammetrie und Fernerkundung.
- The Council of the Photogrammetric Society, Great Britain.
- The Rector of ITC.

The jury for this Congress has decided that there should be 2 winners of the von Gruber Award:

Professor Helmut Mayer was appointed full Professor for Photogrammetry and Remote Sensing at the Institute for Photogrammetry and Cartography University of the Federal Armed Forces Munich Germany in 1999. He receives the award in recognition of his contribution to the evolution of spatial information sciences. Automated object extraction from images is a very vital field of research. In his Habilitation and in the article with the title of "Automatic Object Extraction from Aerial Imagery – A Survey Focusing on Buildings" he has presented an extensive survey and assessment of approaches and a synthesis of current knowledge in this field in a form of a combined model and strategy for object extraction. His outstanding research provides a solid basis for advances in automation and may the reward be a strong motivation for Professor Mayer to continue his excellent scientific work.



Helmut Mayer (middle) and M. G. Vosselman (right) receiving The Otto Von Gruber Award from Karl Harmsen, rector ITC.

Professor M. G. Vosselman who chairs the Institute of Photogrammetry and Remote Sensing at the Delft University of Technology, Faculty of Civil Engineering and Geosciences, The Netherlands, receives the award in recognition of his achievements in the evolution of spatial information sciences as reflected in his paper "Interactive Alignment of Parameterised Object Models to Images". This paper demonstrates a clear understanding of prior research work and presents with scientific rigour a new algorithm for semi-automated object extraction. The demonstrated practicability of his approach opens promising new opportunities for digital photogrammetry. May our prestigious award be a strong motivation for Professor Vosselman to continue his excellent scientific work.

The Rector of ITC, Professor Karl Harmsen presented the medal and certificate to the winners of the Awards.

The Schwidefsky Medal

The Schwidefsky Medal honours the memory of Prof. Dr.-Ing. Kurt Schwidefsky, honorary member of the International Society for Photogrammetry and Remote Sensing (ISPRS) and distinguished professor in Germany by the Deutsche Gesellschaft für Photogrammetrie und Fernerkundung.

It is awarded to persons who have made significant con-

tributions to photogrammetry and remote sensing, either through the medium of publication as author or editor, or in another form.

The selection committee consists of the President of the Deutsche Gesellschaft für Photogrammetrie und Fernerkundung, the President of ISPRS and the Secretary General of ISPRS.

The winners of the Award are:

M. Guy Ducher, France
L.R.A. Narayan, India

Guy Ducher, France

Guy Ducher has since 1988 been Editor of the Bulletin of the Société Française de Photogrammétrie de Télédétection (SFPT), which is now celebrating its 40th anniversary. The bulletin is one of the world's leading French language journals in the field of geomatics. The successful mix of remote sensing and photogrammetry, a mix that does not always mix well, is an example to all Societies. In his earlier career in the Institut Géographique National (IGN), France's national mapping organisation, Guy Ducher had risen to the rank of Ingénieur Général Géographe before retirement from the post of Director responsible for research and development. He was also among the co-authors of Terminologie de Télédétection et

Photogrammétrie, a bilingual manual of technical terminology in remote sensing and photogrammetry, published by the Conseil International de la Langue Française, Paris in 1997.

L.R.A. Narayan, India

Dr. L.R.A. Narayan, has been involved in the area of Photogrammetry and Remote Sensing for over four decades. He has been an ardent teacher, and researcher besides contributing to operational programs. He has to his credit over 80 publications in reputed journals. He has also authored two books. Dr. L.R.A. Narayan, a leading expert in Remote Sensing, writes technical articles on Remote Sensing aspects in a very simple, easy to understand language suitable to the student community and to the general public. In particular, the publication "Remote Sensing and Its Applications" has been written by Dr. Narayanan, to assist students of science, young scientists and the wider public community in learning about Remote Sensing.

The Young Authors Awards

Mr Babak Ameri from Germany with his paper 'Feature-Based Model Verification (FBMV): a new concept for hypothesis validation in building reconstruction'

Dipl.-Ing. Ansgar Brunn from Germany with his paper 'A

step towards semantic-based building reconstruction using Markov-random-fields'

Dipl.-Ing. Marc Honikel from Switzerland with his paper 'Wiener Based Interferometric Signature Reconstruction'



The Young Author Award Winners with ISPRS Council member Shunji Murai.

Dr Jun Li from Canada with his paper 'Spatial Quality Evaluation of Fusion of Different Resolution Images'

Dr Jochen Schiewe from Germany with his paper 'Improving the Integration of Digital Terrain Models'

Dr Satya Priya from Japan with his paper 'National level spatial modeling of agricultural productivity: study of Indian agroecosystem'

Mr Garry Zalmanson from USA with his paper 'Hierarchical Recovery of Exterior Orientation from Parametric and Natural 3-D Curves'

The Gino Cassinis Award

In 1997 the Italian Society for Surveying and Photogrammetry (SIFET) newly established the Gino Cassinis Award in honour of Professor Gino Cassinis. He was a Professor of Applied Mathematics, Geodesy and Photogrammetry at the University of Pisa and the Technical University of Milano from 1920's to 1960's. The scientific work of Professor Gino Cassinis stressed a lot of mathematical and statistical foundations of the surveying and mapping. He served ISP as the President in the period 1934-1938, the Congress Director for the 5th ISP Congress in 1938 and also Technical Commission President of Commission II, V, IV and VII in the period 1926-30, 1938-40, 1948-52 and 1952-56 respectively.

The Gino Cassinis Award is given to persons who have significantly enhanced the mathematical and statistical foundations of photogrammetry, remote sensing and GIS, with the certificate together with a reward of substantial monetary value of Swf. 2,500. The first award of the Gino Cassinis Award is presented to Professor Dr. Wolfgang Förstner for his outstanding achievements and significant contributions to the mathematical and statistical aspects in photogrammetry, particularly computer vision.

Dr Förstner was born in Bad Essen, Germany in 1946 and has served as the Director of the Institute for Photogrammetry, University of Bonn, Germany since 1990. He has published fourteen papers in the period 1996 to 2000 mainly on orientation procedures, three dimensional reconstruction form images and statistics. He has actively served Technical Commission V as the co-chair of Working Group V/3 on scene modelling for visualisation and virtual reality over the past four years. Dr Förstner has committed much of his time an interest to mathematical and statistical development in photogrammetry, image understanding and computer vision. He is also positively involved in activities in other international conferences such as IEEE and SPIE. Therefore, it is appropriate to say that among photogrammetrists and computer vision scientists, he is the strongest leader in the mathematical and statistical aspects in ISPRS. He is a worthy recipient of the first Gino Cassinis Award.

May I ask the President of the Italian Society for Surveying and Photogrammetry to step forward and present the Award to Professor Dr Wolfgang Förstner. Because Professor Förstner is absentia, may I request Mr Eberhard Gülch to receive the award on his behalf.

The President's Honorary Citations 1996-2000

The President's Honorary Citation 1996-2000 is awarded to Karsten Jacobsen

for his many contributions to ISPRS Commission I as exemplified by: his outstanding organisation of Working Group I/3 dealing with "Sensors and Platforms for Topographic Survey"; and for his organisation of very successful Workshops in 1997 and 1999 on "Sensors and Mapping from Space".

The President's Honorary Citation 1996-2000 is awarded to Christian Heipke

for his many contributions to ISPRS Commission II as exemplified by his outstanding: work as Chair of Working Group II/8 "Digital Systems for Image Analysis"; organisation and management of an international test on "Performance of tie point extraction in automatic aerial triangulation"; organisation of four successful international workshops in 1997, 1998 and 1999; and active collaboration with other Working Groups and with OEEPE.

The President's Honorary Citation 1996-2000 is awarded to Beata Csatho

for her many contributions to ISPRS Commission III as

exemplified by her outstanding work as Chair of Working Group III/5 on "Remote Sensing and Vision Theories for Automatic Scene Interpretation." Under her skillful leadership, the WG made major advances in fusing multi-sensor data. She was instrumental in organising the "Ocean City" test data site and in 1999 organised the very successful interdisciplinary Workshop on "Mapping Surface Structure and Topography by Airborne and Spaceborne Lasers".

**The President's Honorary Citation
1996-2000 is awarded to
Emmanuel Baltsavias**

for his many contributions to ISPRS Commission IV as exemplified by his outstanding work as Chair of Inter-Commission Working Group IV/III.2 on "Integration of Image Analysis and GIS"; for his enthusiastic and skillful organisation of the 1997 Joint Workshop "3D Reconstruction and Modeling of Topographic Objects" and the 1999 Joint Workshop "Fusion of Sensor Data, Knowledge Sources and Algorithms for Extraction and Classification of Topographic Objects"; and for securing funds for Young Author Awards.

**The President's Honorary Citation
1996-2000 is awarded to
Sabry El-Hakim**

for his many contributions to ISPRS Commission V as exemplified by his outstanding work as Chair of Working

Group V/3 on "Scene Modeling for Visualization and Virtual Reality"; organising Videometrics V in 1997 and VI in 1999, co-organization of a Joint Workshop in 1999; and preparing a special theme issue for the ISPRS Journal in 1998.

**The President's Honorary Citation
1996-2000 is awarded to
Tania Maria Sausen**

for her many contributions to ISPRS Commission VI as exemplified by her outstanding work as Chair of Working Group VI/1 on "Education" by establishing an ISPRS Education and Training Database on the Internet; by designing and conducting the pilot program for the Task Force on Education and Training; and by organising in 1997 the successful "1st Workshop on Education in Remote Sensing, Mercosul Wide".

**The President's Honorary Citation
1996-2000 is awarded to
Ake Rosenqvist**

for his many contributions to ISPRS Commission VII as exemplified by his outstanding work as Chair of Working Group VII/5 on "Global Monitoring" by organising a session on global and regional scale Earth Observation Programs in 1998 and in 1999 by co-organisation of a Joint Workshop on "Remote Sensing and the Kyoto Protocol".



**The U.V. Helava Award -
The Winners for the 1996-1999 Period**

*By Emmanuel P. Baltsavias, Editor-in-Chief,
ISPRS Journal of Photogrammetry and Remote Sensing*

The first U.V. Helava Award, a new, prestigious ISPRS award, was presented at the Opening Session of the 19th ISPRS Congress on July 17th in Amsterdam, by Lawrence W. Fritz, ISPRS President and Bruce Wald, President and CEO, LH Systems. The winners received a monetary grant of 10,000 SFr., certificates and a silver plaque. The plaque was designed with care and lots of personal unselfish work by the 1980-88 Technical Commission III President, Einari Kilpelä, while the Institute of Photogrammetry and Remote Sensing (Prof. H. Haggrén), Helsinki University of Technology (the University where Helava studied) paid half the costs for the plaque for this and the next 5 awards. The U.V. Helava Award, sponsored by Elsevier Science B.V. and LH Systems, LLC, 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



The silver plaque designed by Einari Kilpelä, Finland.



Presentation of the U.V. Helava Award at the Opening Session of the 19th ISPRS Congress. From left to right: Lawrence W. Fritz, ISPRS President, Bruce Wald, President and CEO of LH Systems and the winners Martina Sinning-Meister, Armin Gruen and Hanbin Dan.

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 recipients of the Award may receive it only once. 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 one to receive the U.V. Helava Award. The first jury evaluated 119 papers for the period 1996-1999 and selected the Best

Paper of each year, which have been already published in the ISPRS Journal, Highlights and on the WEB. The awards for the 3 runner-up papers were presented at the General Assembly of the ISPRS Congress. A second five-member jury selected among these four Best Papers the best for the 1996-1999 period. The winner is the paper:

3D City Models for CAAD-Supported Analysis and Design of Urban Areas
Martina Sinning-Meister, Armin Gruen, Hanbin Dan
published in 1996

The jury's rationale for the paper selection was: This paper is well written and presented and provides a very readable account of an interesting, interdisciplinary topic, namely that of 3D building extraction from images for city modelling. It was one of the first examples of 3D city model generation and visualisation. Although developments have moved on since 1996, judged on its status then, it is innovative and constitutes a significant development in this field. Furthermore, the authors represent a group (Institute of Geodesy and Photogrammetry, ETH Zurich) that published additional good papers on this topic in the PRS over the past 4 years and that is responsible for major developments in 3D city modelling through scientific but also practical contributions, like the development of related operational software systems and their use in various applications. On behalf of the ISPRS and the U.V. Helava Award jury, I would like to congratulate the authors for this distinction and thank them for their contribution. I would also like to thank the sponsors of the Award, and the jury members for their hard work and thorough evaluation.

Other Awards



S. Murai receiving The Honorary Member Award from L. W. Fritz.



T. Woldai receiving The Schermerhorn Award from M. Molenaar.