

Keynote Speakers

Dr. Chao-Han Liu

Chao-Han Liu became Vice President of Academia Sinica on October, 2006 after serving as President of the National Central University in Taiwan for 12 years and as Chancellor of the University System of Taiwan for 4 years. He started his academic career at the University of Illinois at Urbana-Champaign in 1965 where he taught Electrical Engineering for 25 years before returning to Taiwan in 1990. He is a radio scientist and an international leader in solar terrestrial physics and global change research.

In 1988, he and his graduate students pioneered the versatile and inexpensive technology known as Computerized Ionospheric Tomography making possible for global monitoring of the ionosphere for space weather with the crucial participation of worldwide solar terrestrial scientists/engineers including many from developing countries. Also in the late 80's, together with scientists and engineers from JPL, they proposed the GPS radio occultation technique which has now been developed into one of the most forward looking techniques for collecting global weather and climate data, including the ionosphere. He then helped Taiwan plan and launch FORMOSAT – 3 Constellation (COSMIC) mission in 2006 which uses this technique to vastly increase the quantity and quality of the weather and climate data collected on the global scale, thus enhancing the forecast capability and at the same time providing new opportunities for studying the dynamics of the upper atmosphere. Since June 2007, F3 / COSMIC data have been incorporated in the weather forecasting services in most major countries.

He is an internationally recognized leader in Solar Terrestrial Physics. From 1981 to 1999, he played important leadership roles in the Scientific Committee on Solar Terrestrial Physics (SCOSTEP) of ICSU, first as its Scientific Secretary and later as the President. During his tenure, the Committee planned, launched and coordinated three major decade-long international space science programs for solar terrestrial physics, each with the participation of hundreds of scientists all over the world. He played an important role in the development of the Space Program in Taiwan, as one of the original members of the planning committee in the early 90's and later a member of the steering committee for the first 15 years of the program.

Since the mid-90's, he led a group of scientists with different disciplinary background to carry out global change research in Taiwan and established Taiwan as a regional leader in this field internationally. He is the Chairman of the Southeast Asia Regional Center for START (SARCS) which coordinates the international global change research and capacity building for the ten Southeast Asia countries.

During his tenure as the President of the National Central University, he helped transform the university to become one of the top research universities in Taiwan. He was the founding Chancellor of the University System of Taiwan which has become a new model of collaboration among universities in the country. In 2002, he was asked by the Government to co-chair an Inter-Ministerial Committee to draw up a Higher Education Master Plan for Taiwan. The Plan was approved by the Government in 2003 and the main recommendations have been implemented.

He is an academician of the Academia Sinica and a member of TWAS.



Dr. Shailesh Nayak



Dr. Shailesh Nayak is the Secretary to the Government of India for Ministry of Earth Sciences, since August 2008. He has been providing leadership for the programs related to science of climate change, weather services, polar science, ocean modeling, ocean survey and resources, and ocean technology.

Dr. Nayak obtained Ph. D. degree in Geology from the M.S University of Baroda in 1980. He joined the Space Applications Centre, Indian Space Research Organization (ISRO) in 1978 as a scientist, and subsequently elevated as the Director of Marine and Water Resources. He was mainly responsible for conceptualizing, formulating and executing many national level projects related to application of satellite data on ocean colour, integrated coastal zone management, snow and glacier studies and water resources.

Dr. Nayak was appointed as the Director, Indian National Centre for Ocean Information Services (INCOIS), an autonomous institution under the Ministry of Earth Sciences, Hyderabad in May 2006. At INCOIS, he set up a state-of-the-art Early Warning System for Tsunami and Storm Surges in the Indian Ocean. He was responsible for the conceptualization and development of Marine GIS. He made outstanding contributions in improving advisory services related to potential fishing zones, ocean state forecast, and Indian Argo project.

Dr. Nayak is the Chairman of the Research Advisory Committee of the National Institute of Oceanography, Goa as well as the Centre for Earth Science Studies, Thiruvananthapuram. He is the Chair, Governing Board, Birbal Shani Institute of Paleobotany, Lucknow. He has been member of many national committees related to earth science, coastal protection, mangrove and coral reef and coastal zone management.

Dr. Nayak was awarded honorary degree of Doctor of Science by the Andhra University in 2011. He is recipient of the Bhaskara Award for 2009, the Indian National Remote Sensing Award for 1994 by the Indian Society of Remote Sensing, Dehradun, and the National Mineral Award for the year 2005. He is recognized as a Ph.D. Guide by six Universities, and six students have obtained Ph. D. under his supervision. He was Member of the Editorial Board of the Indian Journal of Marine Science, and currently Chair of Planet Earth, and an Editor of Geospatial Today.

Dr. Nayak is currently the Chair, Regional Integrated Multi-hazard Early Warning System (RIMES) and the Indian Ocean Observing System Resource Forum (IRF); was the Vice-Chair of the Inter-Governmental Coordinating Group on Indian Ocean Tsunami Warning System (ICG-IOTWS) (2007-2011). He was President, Indian Society of Remote Sensing, Dehradun; and Chairman, Indian Ocean-Global Ocean Observing System (IO-GOOS) for the term 2006-10. He was President, International Society of Photogrammetry and Remote Sensing (ISPRS), Technical Commission (TC) IV on 'Geo-databases and Digital Mapping' for the term 2004-08. He has represented Indian Space Research Organization (ISRO) in the International Ocean Colour Coordinating Group and International Global Observation Strategy-Coastal theme.

Dr. Nayak has published about 80 papers in International and National journals and atlases.

Dr. Guey-Shin Chang

Dr. Guey-Shin Chang is the Director General, National Space Organization (NSPO), National Applied Research Laboratories (NARL) in Taiwan. He is responsible for managing and directing the Taiwan's space program. He earned his BS degree in Civil Engineering from National Central University (Taiwan) in 1981. He received the MS and Ph.D. degrees both in Engineering Mechanics of the University of Alabama in 1987 and 1991 respectively. Dr. Chang's devoted his academic researches in the areas of computational dynamics, structure dynamics, and numerical analysis in complex systems.

After his back to Taiwan in 1992, Dr. Chang was recruited by NSPO as a systems engineer for the Taiwan's space program. In 1995, he was assigned to Northrop Grumman (former TRW, Inc.) to lead the systems engineering team in FORMOSAT-1 program and dedicate his career as a satellite systems engineering professional. In 1997, he was promoted as Director of Systems Engineering Division of NSPO. He was successfully leading NSPO's team to accomplish the launch and operations phase of FORMOSAT-1 and the system design phase of FORMOSAT-2. In 1999, Dr. Chang took over the position of Director of Ground System Division at NSPO. During his directorship, he had led a project successfully upgraded NSPO's mission operations center into the Multi-Mission Center capable of operating multiple satellites simultaneously. When NARL was established in 2003, Dr. Chang was promoted as Director of Business Development Division, but concurrently served as Director of Ground System of NSPO until 2005, responsible for promoting and integrating the NARL's research capabilities among eleven laboratories. He had led several NARL's frontier and innovative research projects including Space-qualified CMOS Image Sensor Development, MEMS-based Micro-satellite Component Development, and 3D GIS Taiwan (a virtual reality satellite imagery platform for environment monitoring & disaster reduction applications). In 2008, Dr. Chang was appointed as Deputy Director General responsible for supervising the NSPO's developing satellite programs. He also served as Program Director of FORMOSAT-5 to develop the first indigenous high-resolution remote sensing satellite of Taiwan. In April of 2010, Dr. Chang was appointed as Director General of NSPO by NARL with expectation of leading NSPO toward the new era of Taiwan's space programs. Currently, Dr. Chang is responsible for leading a joint US/Taiwan mission of FORMOSAT-7/COSMIC-2 to deploy a next generation GNSS Radio Occultation satellite constellation system for weather prediction, space weather monitoring, and geodesic research. He is serving as the Academician of International Academy of Astronautics (IAA) as well.



Dr. Orhan Altan



Prof. Orhan Altan served twice as Vice-Dean of the Faculty of Civil Engineering and in the period of 1994-97; he worked also as Head of the Department of Geodesy and Photogrammetry. He is Member of the Turkish Chambers of Civil Engineers and Surveying Engineers, and Turkish Societies for Photogrammetry and Remote Sensing, for Geodesy and Geophysics, for Geotechnics and for Rock Mechanics.

Between 1978 and 80 he worked as liaison officer between ISPRS Commissions V and VII, in non-topographical applications of photogrammetry. He is member of the German Society for Photogrammetry and Remote Sensing and the Working Group "Close-Range Photogrammetry", Chairman of the former OEEPE (The European Organization for Experimental Photogrammetric Research) now EuroSDR (European Spatial Data Research) Working Group "Spatial Data Quality Management", invited member of the IAG (International Association of Geodesy) Working Group IV "Applications of Geodesy to Engineering", vice-chairman of the FIG (International Federation of Surveyors) Working Group 5.3 "Cinematic and Integrated Positioning Systems" and corresponding member of the German Geodetic Commission at the Bavarian Academy of Sciences.

He is the initiator and co-organizer of the symposium series "Turkish – German Joint Geodetic Days" since 1995. He is also member of the American and German Societies for Photogrammetry and Remote Sensing.

He is member of the UN expert group of the ad-hoc Committee of the UN Entity, SPIDER (Space-based Information for Disaster Management and Emergence Response) and chair of the JB GIS (Joint Board of Geospatial Information Societies) ad hoc Committee on Risk and Disaster Management. He is also Corresponding Member of the International Academy of Astronautics.

He was Ordinary Member of the Executive Board of The ICOMOS (International Council on Monuments and Sites / ISPRS Committee for Documentation of Cultural Heritage (CIPA) for the period 2000-2005. He was also Symposium Director of the XIXth CIPA Symposium in ANTALYA/TURKEY in 2003.

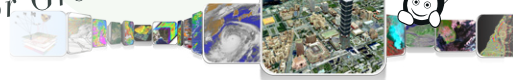
He worked as "Guest Professor" in Stuttgart, Berlin, Munich Technical Universities (Germany) and ETH-Zurich (Switzerland) during the period 1990-2005.

In the ISPRS Congress in Amsterdam he was nominated as the Congress Director of the ISPRS Congress in 2004 in Istanbul. At the Congress in Istanbul in July 2004 he was elected as the Secretary General of ISPRS for the period 2004-2008. At the last ISPRS Congress in Beijing in 2008 he was elected as the President of ISPRS for the period 2008-2012.

He has been a Council Member of the International Society of Photogrammetry and Remote Sensing (ISPRS) since 2000. He has published more than 150 papers in Turkish, German and English in Domestic and International Journals. He is editor or co-editor of more than 16 International Books.

His main working areas are Digital and Architectural Photogrammetry, Spatial Information Systems and Deformation Measurements.

He is married (with Melike Altan, Prof at the ITU) and has one daughter and one son.



Dr. Shunji Murai



Prof. Shunji Murai is currently a Professor Emeritus at the University of Tokyo and President of several academic and professional societies in Japan, including Japan Association of Surveyors, Japan Society of Photogrammetry and Remote Sensing (JSPRS), and Japan Association of Remote Sensing (JARS). Prof. Murai graduated from Department of Civil Engineering, University of Tokyo in 1963 and was awarded Doctor of Engineering in 1970. Since then he has devoted himself to the research, development, education and promotion of remote sensing and related disciplines.

Prof. Murai was an Associate Professor and Professor at the Institute of Industrial Science, University of Tokyo from 1971 to 1983 and from 1983 to 2000, respectively. He was also twice appointed as a Professor at the Asian Institute of Technology (AIT) from 1992 to 1995 and from 1997 to 1999. From 1992 to 1996, he was the President of the International Society for Photogrammetry and Remote Sensing (ISPRS). Prof. Murai's one of the most renowned experiences is his devotion and long-term commitment to Asian Association on Remote Sensing (AARS), which he co-founded in 1981 and had served as the General Secretary until 2009.

Prof. Murai has received many awards and honors from international institutes and organizations. These awards and honors include: Honorary Fellow, ITC (Netherlands 1993); Honorary Professor; Wuhan University (China 1994); Indrabarya Gold Medal (AARS 1995); Most Exalted Order of White Elephant Class II (Thailand 1997); Honorary Doctor, Swiss Federal Institute of Technology (ETH 1998); Honorary Member (ISPRS 2000); and Honorary Member (AARS 2009).

Prof. Murai has authored, co-authored and edited more than 50 books, including Human and Disaster (Chairman and Co-author, Editing Committee in 2006; Volume 1 and 2007; Volume 2 in Japanese Version published by SBB), Geo-spatial Information Engineering (Author, Japan Association of Surveyors 1999), Toward Geo-spatial Information Consultant (Supervisor and Co-author, Japan Association of Surveyors 2010), Lessons from East Japan Earthquake and Tsunami (Japanese) published from Kokon Shoin, 2011, and others. He also has a patent for Prediction on Volcanic Eruption and Earthquake (Japanese Patent: No. 3763130, 2006).

Dr. Armin Gruen

Prof. Dr. Armin Gruen was since 1984 Professor and Head of the Chair of Photogrammetry at the Institute of Geodesy and Photogrammetry, Federal Institute of Technology (ETH) Zuerich, Switzerland. Since 1 August 2009 he is retired and is now with the Institute of Conservation and Building Research, Department of Architecture, ETH Zuerich.

He graduated in 1968 as Dipl.-Ing. in Geodetic Science and obtained his doctorate degree 1974 in Photogrammetry, both from the Technical University Munich, Germany. From 1969 to 1975 he worked as Research and Teaching Associate, and until 1981 as Chief Engineer at the Institute of Photogrammetry and Cartography, Technical University Munich. From 1981 to 1984 he acted as Associate Professor at the Department of Geodetic Science and Surveying, The Ohio State University, Columbus, Ohio, USA.

Prof. Gruen has held lecturing and research assignments at the University of Armed Forces, Munich, Germany, Helsinki University of Technology, Finland, Università degli Studi di Firenze, Italy, Stanford Research Institute, Menlo Park, USA, Department of Geodesy, Technical University Delft, Netherlands, Asian Institute of Technology (AIT), Bangkok, Thailand, Department of Geomatics, University of Melbourne, Australia, Center for Space and Remote Sensing Research, National Central University, Jhongli City, Taiwan, SCUDO program of the Politecnico Torino, Politecnico di Milano – Polo Regionale di Como, both Italy, Department of Geomatics, National Cheng Kung University, Tainan, Taiwan, Chinese Academy of Surveying and Mapping (CASM), Beijing.

He has lectured at University level since 1969, with photogrammetry and remote sensing as major subjects, and surveying, cartography and adjustment calculus as minor subjects.

He served as the Head of the Department of Geodetic Sciences 1996-97 and as the Dean of Faculty "Rural Engineering and Surveying" of ETH Zurich (1996-98). He is Member of the Editorial Boards of several scientific journals. He has published more than 400 articles and papers and is Editor and Co-editor of over 21 books and Conference Proceedings. He has organized and co-organized/co-chaired over thirty international conferences and he has served as a consultant to various government agencies, system manufacturers and engineering firms in Germany, Japan, Korea, Switzerland, USA and other countries. He is co-founder of CyberCity AG, Zurich and 4DiXplorer AG, Zurich, Switzerland.

He served as the President of ISPRS Commission V (ISPRS...International Society of Photogrammetry and Remote Sensing), as ISPRS Council Member (Second Vice President) and Council Member of IUSM (International Union of Surveys and Mapping) and as Chairman of the ISPRS Financial Commission. He is currently Chairman of the ISPRS International Scientific Advisory Committee (ISAC) and the ISPRS Ad-hoc Committee on "Knowledge Transfer", International Member of the Fourth Academic Committee of the State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing (LIESMARS), Wuhan University, China, Member of the First Academic Committee of the Key Laboratory of Mapping from Space of the Chinese Academy of Surveying and Mapping (CASM), Beijing, China and Member of the Executive Board of the Digital Earth Society, Member of the International Expert Committee for Strategic Development of CEODE (Center for Earth Observation and Digital Earth, Chinese Academy of Sciences), Beijing.

His major international awards and honors include the Otto von Gruber Gold Medal (ISPRS, 1980), Talbert Abrams Award Grand Trophy (ASPRS, 1985 and 1995), with Honorable Mention 1989, Fairchild Award (ASPRS, 1994), Miegunyah Distinguished Fellowship Award of the University of Melbourne, 1999, ISPRS U.V. Helava Award 2000, E.H. Thompson Award 2005, ISPRS Brock Gold Medal Award 2008, Dr. Boon Indrabarya Gold Medal Award 2009, Corresponding Membership of the German Geodetic Commission, Munich, Ordinary Member of the German Archaeological Institute (DAI), Honorary Professorships of the Wuhan University, Wuhan, China and Yunnan Normal University, Kunming, China, Honorary Member of the Japan Society of Photogrammetry and Remote Sensing, Fellow Professor at the Center for Space and Remote Sensing Research, National Central University, Jhongli City, Taiwan, Visiting Chair Professor National Cheng Kung University, Department of Geomatics, Tainan, Taiwan, and Honorary Member of ISPRS.

