



# **9th International Workshop on Dynamic and Multi-dimensional GIS (DMGIS 2025)**

22 -24 August 2025, Beijing

Organized by: Technical Commission IV 'Spatial Information Science', International Society for Photogrammetry & Remote Sensing (ISPRS)

Hosted by: Beijing University of Civil Engineering and Architecture (BCEA)

Supported by: Commission 3 'Spatial Information Management', International Federation of Surveyors (FIG)

Moganshan Geospatial Information Laboratory, China

National Geomatics Center of China

Commission 'Intelligent Mapping', Chinese Society for Geodesy Photogrammetry and Cartography (CSGPC)

Commission 'Low-altitude Economy', GNSS & LBS Association of China

Commission 'Global Services', China Association for Geospatial Information Society

ISC GeoUnions Standing Committee on Disaster Risk Reduction

UN-GGIM Academic Network

'Belt and Road' Architectural University International Alliance

International Society for Photogrammetry & Remote Sensing (ISPRS) International Journal of Geo-Information

## Welcome Message

Modelling the changing world has been the challenge of the geospatial society for years. International Society for Photogrammetry and Remote Sensing (ISPRS) initiated the workshop series on ‘Dynamic and Multi-dimensional Geographic Information System (DMGIS)’ in 1997 and 8 workshops with this title have been organized in different places of the world since then.

The advent of ICT (Information, Communication, and Technology) has opened a new era, which greatly increases the demand for capturing, integration, and analysis complex spatial and temporal data in multiple dimensions for various applications, ranging from urban planning and environmental monitoring to disaster response and smart city development. Furthermore, as the world becomes increasingly interconnected and data-driven, we need sophisticated models that can represent and simulate the dynamic interactions between physical, social, and economic systems over time and across different geographical scales, so to predict the behavior of systems within a multidimensional spatial-temporal framework becomes crucial for decision-making, resource allocation, and risk management. Some countries have already initiated National 3D Mapping programs, and the demand for related methodologies and technologies has become more urgent.

To enhance the study of dynamic and multi-dimensional modelling of the real world, we organize the 9th International Workshop on Dynamic and Multi-dimensional Geographic Information System (DMGIS 2025), to bring together researchers, practitioners, industry experts, and thought leaders from around the globe to discuss, share, and explore the latest developments and innovations in the fields.

We have invited leading experts in the field to deliver keynote speeches. Two Panel sessions are arranged, featuring active experts who will give thematic presentations on ‘Intelligent Geospatial Modelling’ and ‘Planetary, Marine, Underground Modelling’ together with panel discussions. In addition, four technical sessions will focus on hot topics such as Advances in 3D Modelling, AI-Enabled Low Altitude and Ground Modelling, Grid-based Spatial Modeling, and Geospatial Applications. Notably, we have organized six student sessions to provide the younger generation with opportunities for presentation, exchange, and collaboration.

We have received 106 abstract submissions and 77 of them are accepted after peer reviewing. Finally, 62 full papers based on the accepted abstract will be published in the International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences (<https://www.isprs.org/publications/archives.aspx>).



## Programme at a Glance

Aug.22, Friday		
09:00-09:30	Opening Ceremony	
09:30-10:00	Coffee Break	
10:00-12:00	Keynote Session	
12:00-13:30	Lunch	
13:30-15:00	Panel session 1 Intelligent Geospatial Modelling	Panel Session 2 Planetary, Marine, Underground Modelling
15:00-15:30	Coffee Break	
15:30-17:00	Technical Session 1 Advances in 3D Modelling	Technical Session 2 AI-Enabled Low Altitude and Ground Modelling
17:30-18:30	Supper	
Aug.23, Saturday		
08:30-10:00	Technical Session 3 Grid-based Spatial Modeling	Technical Session 4 Geospatial Applications
10:00-10:30	Coffee Break	
10:30-12:00	Student Session 1 Complex Scenes Modelling	Student Session 2 3D Modelling
12:00-13:30	Lunch	
13:30-15:00	Student Session 3 Modelling of Environment	Student Session 4 Information Extraction
15:00-15:30	Coffee Break	
15:30-17:00	Student Session 5 Data Processing and Applications	Student Session 6 Data Processing and Applications
17:30-19:00	Supper	
Aug.24, Sunday		
Technical Visits		

# Programme

August 22, 2025, Friday	
09:00-09:30	<b>Opening Ceremony</b> <b>Chair:</b> Jie Jiang, Secretary General of ISPRS <b>Venue:</b> Student Activity Center
	<ul style="list-style-type: none"> <li>Welcome Addresses             <ul style="list-style-type: none"> <li>Zhaohui Chen, Vice President of Beijing University of Civil Engineering and Architecture</li> <li>Nicolas Paparoditis, Vice President of International Society for Photogrammetry and Remote Sensing</li> <li>Qin Yan, Vice President of International Federation of Surveyors</li> </ul> </li> <li>Introduction of ISPRS 2026 Congress, <i>Songnian Li, Toronto Metropolitan University, Canada</i></li> <li>Group Photo</li> </ul>
09:30-10:00	<i>Coffee Break</i>
10:00-12:00	<b>Keynote Session</b> <b>Chair:</b> Hao Wu, Secretary of ISPRS TC IV, National Geomatics Center of China Xianglei Liu, Dean, School of Geomatics and Urban Spatial Informatics, Beijing University of Civil Engineering and Architecture <b>Venue:</b> Student Activity Center
	<ul style="list-style-type: none"> <li>Global Geospatial Public Goods: Co-development and Collaborative Services, <i>Jun Chen, National Geomatics Center of China and Moganshan Geospatial Information Laboratory, China</i></li> <li>Trends in topographic mapping for the perspective of a National Mapping Agency, <i>Nicolas Paparoditis, Institut Géographique National, France</i></li> <li>The vision and implementation of spatial digital twins in Australia, <i>Sisi Zlatanova, University of New South Wales, Australia</i></li> <li>Remote sensing and machine learning for urban air quality and heat island monitoring, <i>Maria Brovelli, Politecnico di Milano, Italy</i></li> </ul>
12:00-13:30	<i>Lunch (Cafeteria)</i>
13:30-15:00	<b>Panel Session 1: Intelligent Geospatial Modelling</b> <b>Chair:</b> Songnian Li, Toronto Metropolitan University, Canada Shisong Cao, Beijing University of Civil Engineering and Architecture <b>Venue:</b> Room 505, Lab. Building No.2
	<ul style="list-style-type: none"> <li>Hybrid intelligence for geospatial science, <i>Zhilin Li, Moganshan Geospatial Laboratory and Southwest Jiaotong University, China</i></li> <li>Artificial intelligence empowers spatiotemporal intelligence, <i>Qiang Zhu, Zhejiang University, China</i></li> <li>AI-empowered urban human mobility by spatiotemporal multimodal data, <i>Wei Huang, Tongji University, China</i></li> </ul> <p><b>Panel Discussion</b></p> <p>This short panel discussion will focus on exploring the challenges facing intelligent geospatial modeling in terms of the ever-expanding deluge of data, the complexities of integrating artificial intelligence, and the persistent need for robust data management and security and engage in dialogue with each other and the audience.</p>

13:30-15:00	<b>Panel Session 2: Planetary, Marine, Underground Modelling</b>
	<b>Chair:</b> Sisi Zlatanova, University of New South Wales, Australia Qiang Chen, Beijing University of Civil Engineering and Architecture <b>Venue:</b> Lecture Hall 2
	<ul style="list-style-type: none"> <li>• Applications of 3D real scene in lunar and planetary exploration, <i>Zhizhong Kang, China University of Geosciences, China</i></li> <li>• Multi-dimensional modelling of the deep-sea lost city hydrothermal field using high-resolution 3D reconstruction from HOV data and SfM techniques, <i>Miao Fan, National Marine Data and Information Service, China</i></li> <li>• Depth estimation from thermal infrared imagery for 3D mapping in underground tunneling scenarios: dataset, methods and practices, <i>Zhihua Xu, China University of Mining and Technology-Beijing, China</i></li> </ul> <p style="text-align: center;"><b>Panel Discussion</b></p> <p>This short panel discussion will focus on exploring the challenges facing planetary, marine, or underground modelling in terms of data scarcity, environmental complexity, and the intricate physics governing these domains and engage in dialogue with each other and the audience.</p>
15:00-15:30	<i>Coffee Break</i>
15:30-17:00	<b>Technical Session 1: Advances in 3D Modelling</b>
	<b>Chair:</b> Maria Brovelli, Politecnico di Milano, Italy Xian Guo, Beijing University of Civil Engineering and Architecture <b>Venue:</b> Room 505, Lab. Building No.2
	<ul style="list-style-type: none"> <li>• 3D reconstruction via depth and normal priors guided 3D Gaussian Splatting, <i>Jiaxun Jiang, Qingdong Wang, Li Zhang, Chinese Academy of Surveying and Mapping</i></li> <li>• A multi-scale 3D terrain modeling and visualization method for radiating tidal sand ridges based on DEM, <i>Zhiming Wan, Xinyu Huang, Yuan Ding, School of Earth Sciences and Engineering Hohai University</i></li> <li>• Automatic detection of mining subsidence using InSAR and YOLO v11 model, <i>Lei Chen, Jianyu Wang, Ning Wang, Siao Liu, Hongwei Li, Ye Tian, Satellite Communications Branch, China Telecom Co. Ltd.</i></li> <li>• Remote sensing for typhoon flood economic loss assessment: current state and digital twin prospects, <i>Wei Jing, Denghua Yan, Jie Liu, Qiang He, Ming Liu, Zhiguo Pang, Rong Li, Yizi Shang, Akiyuki Kawasaki, China Institute of Water Resources and Hydropower Research</i></li> <li>• Construction and updating technology for a spatiotemporal evolution knowledge graph of geographic entities: using national fundamental geographic entity data in China as study case, <i>Shiquan Zhao, Jianjun Liu, Jianwei Liu, Yin Gao, Bianli Zhao, Hao Li, Jian Che, Xue He, Zhaokun Zhai, National Geomatics Center of China</i></li> </ul>
15:30-17:00	<b>Technical Session 2: AI-Enabled Low Altitude and Ground Modelling</b>
	<b>Chair:</b> Wei Huang, Tongji University, China Pingbo Hu, Beijing University of Civil Engineering and Architecture <b>Venue:</b> Lecture Hall 2
	<ul style="list-style-type: none"> <li>• Research on integrated sensing, communication, navigation and control technology for unmanned aerial vehicle swarms in low-altitude economy, <i>Baoguo Yu, Yunlong Zhang, State Key Laboratory of Comprehensive PNT Network and Equipment Technology.</i></li> <li>• Enabling urban air mobility: 3D geospatial grid-based airspace suitability analysis, route delineation, and public service accessibility assessment, <i>Shanqi Zhang, Qingyu Lei, Nanjing University</i></li> </ul>

	<ul style="list-style-type: none"> <li>Exploring the potential of vision-language models in remote sensing through prompt optimization, <i>Weibin Ma, Ruiqian Zhang, Xiaogang Ning, Hanchao Zhang, Yixin Chen Chinese Academy of Surveying and mapping</i></li> <li>Integrating satellite remote sensing and dynamic GIS for urban flood risk modelling in Ulaanbaatar, <i>Erkhemzorig Ishdorj, Ochirkhuyag Lkhamjav, Ulziisaikhan Ganbold, Mongolian University of Science and Technology, Mongolia</i></li> <li>ISPRS IJGI and Geomatics — From Understanding to Collaboration, <i>Elena Duan, MDPI</i></li> </ul>
17:30-18:30	<i>Supper (Cafeteria)</i>
<b>August 23, 2025, Saturday</b>	
8:30-10:00	<b>Technical Session 3: Grid-based Spatial Modeling</b> <b>Chair:</b> Tengteng Qu, Peking University <b>Venue:</b> Room 505, Lab. Building No.2
	<ul style="list-style-type: none"> <li>A review on Grid-based Spatial Modeling: advantages and prospects, <i>Xiaochong Tong, Institute of Geospatial Information, Information Engineering University</i> (Invite Presentation)</li> <li>Grid graph convolutional network with neighborhood learning for spatio-temporal prediction, <i>Bing Han, Tengteng Qu, Peking University</i></li> <li>A concept of Levels of Detail for 3D modelling of Buddhist statues, <i>Hongchao FAN, Norwegian University of Science and Technology</i></li> <li>The relationship between urban spatial form and urban carbon emissions at the grid scale: a case study of Beijing, <i>Bingquan Yao, National Quality Inspection and Testing Center for Surveying and Mapping Products</i></li> <li>A novel earth-system spatial grid model: ISEA4H-ESSG for multi-layer geoscience data integration and analysis, <i>Yue ma, Long Zhao, Aerospace Information Research Institute, Chinese Academy of Sciences</i></li> </ul>
8:30-10:00	<b>Technical Session 3: Geospatial Applications</b> <b>Chair:</b> Shanqi Zhang, Nanjing University <b>Venue:</b> Lecture Hall 2
	<ul style="list-style-type: none"> <li>A multi-criteria GIS approach to evaluate transit accessibility index: integrating FAHP in suburban Malaysia, <i>Lufti A.Rahaman, Nabilah Naharudin, Siti Aekbal Salleh, Elina Alias, Universiti Teknologi MARA, Malaysia</i></li> <li>Advancing sustainable forest management in arkhan-Uul province, Mongolia using the spectral forest index (SFI), <i>Ochirkhuyag Lkhamjav, Bayanmunkh Norovsuren, Tsolmon Altanchimeg, Ulziisaikhan Ganbold, Battuya Sanjaakhand, National Central University</i></li> <li>Research on cultivated land identification method in Alaer Reclamation Area, Xinjiang based on multi-source remote sensing, <i>Yanchun Wang, Sanmin Sun, Jing Jia, Tarim University</i></li> <li>Research on automated post-earthquake building damage assessment method, <i>Siao Liu, Ye Tian, Lei Chen, Ning Wang, Jianyu Wang, Yihuan Li, Satellite Communications Branch, China Telecom Company Limited</i></li> <li>Assessment of economic recovery in Shanghai, China after the pandemic using quarterly nighttime light data, <i>Feng Li, Xingjian Fu, Jiajun Li, Jinyu Zhang, Institute of Disaster Prevention</i></li> </ul>

10:00-10:30	<i>Coffee Break</i>
10:30-12:00	<p align="center"><b>Student Session 1: Complex Scenes Modelling</b></p> <p><b>Chair:</b> Xian Guo, Beijing University of Civil Engineering and Architecture  <b>Venue:</b> Room 505, Lab. Building No.2</p>
	<ul style="list-style-type: none"> <li>DEROA: a differential evolution rolling optimization approach for multi-UAV trajectory planning based on spatial grid probability map, <i>Jiayuan Cheng, Xiaochong Tong, Hao Guo, Yuekun Sun, Jiayi Tang, Chang Yuan, Information Engineering University</i></li> <li>Voxel-based path planning for UAVs in indoor dynamic environments, <i>Yonghan Liao, Zhiyong Wang, Yongjie Lin, Chengzong Liu, Lang Hu, YiLang Lin, Junjie Lu, Zhendong Wu, South China University of Technology</i></li> <li>UAV image sequence reveals feature damage during hurricane evolution, <i>Bo Liu, Xiongwu Xiao, Zhenfeng Shao, Yingbing Li, Shinying Dai, Wenxin Fu, Deren Li, Wuhan University</i></li> <li>Tunneling-induced ground subsidence revealed by spaceborne and UAV-borne synthetic aperture radar interferometry, <i>Mingshan MO, Bochen Zhang, Linjie Zhang, Shuai Yuan, Songbo Wu, Gan Qin, Shenzhen University</i></li> <li>Research on model reconstruction methods for indoor complex scenes, <i>Jiangkun Liu, Zhenqing Yang, Xuwei Chen, Kunyang Liu, Beijing University of Civil Engineering and Architecture</i></li> <li>An optimized UAV flight path planning method based on urban low-altitude navigation knowledge graph, <i>Ying Kong, Xian Guo, Beijing University of Civil Engineering and Architecture</i></li> </ul>
10:30-12:00	<p align="center"><b>Student Session 2: 3D Modelling</b></p> <p><b>Chair:</b> Shisong Cao, Beijing University of Civil Engineering and Architecture  <b>Venue:</b> Lecture Hall 2</p>
	<ul style="list-style-type: none"> <li>Semantic-aware multi-scale simplification of urban-scale 3D real-scene mesh models, <i>Wang Xia, Yong Luo, Jiang Fan, Shaoyi Wang, Xinyi Liu, Yongjun Zhang, Liang Fei, Wei Wang, Bin Zhang, Jinming Zhang, Zeshuang Zheng, China Railway Siyuan Survey and Design Group Co., Ltd.</i></li> <li>A review of research on dense matching algorithms in digital surface model, <i>Ziti Zhang, Chang Wang, Fan Mo, University of Science and Technology Liaoning</i></li> <li>3D topological relations in double-holed complex bodies for shoal-bar system evolution, <i>Jialu Liu, Liang Leng, Jilin University</i></li> <li>Building contour extraction from fused LiDAR and photogrammetric point clouds using PointNet++, <i>Jianghong Zhao, Mengtian Cao, Jia Yang, Beijing University of Civil Engineering and Architecture</i></li> <li>High-precision 3D recognition of road potholes based on binocular vision and cross-modal feature fusion, <i>Hanzheng Wang, Shishuo Xu, Danyang Hu, Zheng Wen, Jianxi Ou, Beijing University of Civil Engineering and Architecture</i></li> <li>An improved adaptive dynamic LOD algorithm based on large-scale point clouds, <i>Zhaolong Li, Chenzhe Wang, Xuwei Chen, Shiliang Tao, Beijing University of Civil Engineering and Architecture</i></li> </ul>
12:00-13:30	<i>Lunch (Cafeteria)</i>



13:30-15:00	<b>Student Session 3: Modelling of Environment</b> <b>Chair:</b> Qiaoli Wu, Beijing University of Civil Engineering and Architecture <b>Venue:</b> Room 505, Lab. Building No.2
	<ul style="list-style-type: none"> <li>Monitoring lake crab aquaculture with dynamic GIS: spatio-temporal analysis between aquaculture extent and water quality in Yangcheng Lake, China, <i>Ziyan Peng, Yingying Pang, Yaning Kang, Jingying Luo, College of Urban and Environmental Sciences, Central China Normal University</i></li> <li>Predicting net ecosystem carbon exchange of typical forest ecosystems in China based on ChinaFLUX, <i>Jingjing Wu, Qiaoli Wu, Wei He, Jie Jiang, Beijing University of Civil Engineering and Architecture</i></li> <li>Dynamic change of ice flow velocity in Holmes Glacier since the 1970s, <i>Shi Li, Guojun Li, Yuan Cheng, Xuehui Pi, Rongxing Li, Tongji University</i></li> <li>Graph learning-based spatial structural identification of drought regions, <i>Jingxin Zhang, Beijing University of Civil Engineering and Architecture</i></li> <li>Impacts of Triple La Niña events on forest gross primary productivity in China from 2020 to 2022, <i>Wensi Ma, Qiaoli Wu, Wei He, Jie Jiang, Beijing University of Civil Engineering and Architecture</i></li> <li>Assessing uncertainties in mass balance estimation using the input-output method: a case study from Queen Maud Land to MacRobertson Land, <i>Guojun Li, Tong Hao, Zhongbo Huang, Chen Lv, Liang Tang, Shi Li, Xiangbin Cui, Bo Sun, Kenichi Matsuoka, Rongxing Li, Tongji University</i></li> </ul>
13:30-15:00	<b>Student Session 4: Information Extraction</b> <b>Chair:</b> Runjie Wang, Beijing University of Civil Engineering and Architecture <b>Venue:</b> Lecture Hall 2
	<ul style="list-style-type: none"> <li>Research on local-global spatio-temporal topic model based on social media text data with location information, <i>Haiqi Wang, Xueying Li, Fadong Li, Yawen Ou, Yuanhao Cao, Baozhong Wang, Jun He, Tong Liu, Yanwei Wang, China University of Petroleum East China,</i></li> <li>Research on intelligent extraction and visualization methods for lane-level road defects, <i>Haoyu Li, Jianqin Zhang, Jianxi Ou, Zheng Wen, Beijing University of Civil Engineering and Architecture</i></li> <li>Remote sensing image super-resolution using feature grouped multi-scale network, <i>Wei-Tao Zhang, Nuo Xu, Yi-bo Dang, Xidian University</i></li> <li>Enhanced change detection in historical urban districts: a lightweight visual transformer integration with context-aware local feature augmentation, <i>Lujin Hu, Senchuan Di, Beijing University of Civil Engineering and Architecture</i></li> <li>Research on planar mosaic method for colored textures of regularly symmetric jar-type cultural relics, <i>Xiangyu Yuan, Yungang Hu, Beijing University of Civil Engineering and Architecture</i></li> <li>Remote sensing image scene graph generation method based on knowledge graph enhancement and relationship filtering, <i>Yu Geng, Jingguo Lv, Beijing University of Civil Engineering and Architecture</i></li> </ul>
15:00-15:30	<i>Coffee Break</i>



15:30-17:00	<b>Student Session 5: Data Processing and Applications</b>
	<b>Chair:</b> Qiaoli Wu, Beijing University of Civil Engineering and Architecture <b>Venue:</b> Room 505, Lab. Building No.2
	<ul style="list-style-type: none"> <li>Multi-agent simulation modeling and optimization strategies for pedestrian-vehicle conflict behavior at intersections, <i>Yanfang Zhang, Jianqin Zhang, Chaonan Hu, Zheng Wen, Beijing University of Civil Engineering and Architecture</i></li> <li>An experimental method for station-city integration assessment, <i>Yan Yu, Jing Yang, Hongliang Zhang, Xinran Li, Xinyi Yang, Yuqing Hou, Beijing University of Civil Engineering and Architecture</i></li> <li>Design of an architectural heritage visualization system based on Cesium, <i>Han Liu, Xuwei Chen, Shiliang Tao, Chenzhe Wang, Beijing University of Civil Engineering and Architecture</i></li> <li>Two-phase oblique photogrammetric model for automated change detection in railroad slopes, <i>Xingning Zhu, Ming Huang, Lei Wang, Beijing University of Civil Engineering and Architecture</i></li> <li>Dynamic multidimensional sensor data acquisition with adaptive Kalman filtering, <i>Bing Yu, Beijing University of Civil Engineering and Architecture</i></li> </ul>
15:30-17:00	<b>Student Session 6: Data Processing and Applications</b>
	<b>Chair:</b> Runjie Wang, Beijing University of Civil Engineering and Architecture <b>Venue:</b> Lecture Hall 2
	<ul style="list-style-type: none"> <li>Flood risk assessment in the Greater Bay Area based on multidimensional dynamic data, <i>Shuainan Liu, Yang Liu, Tianwei Zhao, Beijing University of Civil Engineering and Architecture</i></li> <li>A framework for cartographic representation of archaeological sites under the digital humanities perspective, <i>Depeng Xie, Yungang Hu, Beijing University of Civil Engineering and Architecture</i></li> <li>Real-time attitude prediction and dynamic monitoring of super-tall buildings using TQWT-TCN-LSTM-GAM integrated with GNSS multi-antenna systems, <i>Jian Wang, Yongbo Lai, Xinyi Mao, Beijing University of Civil Engineering and Architecture</i></li> <li>Construction of multi-granularity spatio-temporal object model for intelligent highway maintenance, <i>Xiaoguang Wang, Jianqin Zhang, Zheng Wen, Jianxi Ou, Xinyue Cheng, Beijing University of Civil Engineering and Architecture</i></li> </ul>
17:30-19:00	<i>Supper (Cafeteria)</i>

# Keynote Speakers

## Jun Chen



- Chief scientist of National Geomatics Center of China
- Academician of the Chinese Academy of Engineering
- Former President of ISPRS (2012-2016)

**Biography:** Chen Jun is the chief scientist of National Geomatics Center of China (NGCC). He graduated from Wuhan University and studied remote sensing in IGN, France, in the beginning of 1980s. He has led the development of the world's first wall-to-wall 30-m global land cover data set (GlobeLand30), the continuous updating of national geospatial databases at 1:50,000 scales, and made significant contribution to geospatial information sciences through developing novel algorithms or value-added applications. He became a full professor in Wuhan University in 1992 and supervised more than 50 PhD students since then. He has served ISPRS for over 24 years, including Working group Chair (1996-2000), Technical commission president (2000-2004), Congress director (2004-2008), Secretary general (2008-2012), President (2012-2016) and First vice president (2016-2020). He received more than 20 international and national awards, such as the World Geospatial Innovation Award (2015), National Science Prizes (2004, 2014, 2017) and Asia Geospatial Lifetime Achievement Award (2017). He has elected as a member of Chinese Academy of Engineering in 2019.

## Nicolas Paparoditis



- Deputy General Director of National Institute of Geographic and Forest Information (IGN France)
- Vice President of ISPRS (2022-2026)

**Biography:** Nicolas Paparoditis is currently Deputy General Director of IGN-France. He is a senior research Professor and technologist. He was previously Director of Research and Higher Education at IGN-France, head of the Ecole Nationale des Sciences Géographiques, the French engineering school of Geoinformation, and Vice-President of University Gustave Eiffel. Before that he chaired the MATIS remote sensing and 3D image processing laboratory of IGN. He started his career in 1992 in the industry working for Aerospatiale on 3D mapping from VHR satellite images. He has also been the Officer in charge of the programme "Digital Models/Twins" at ANR, the French National Research Agency, in the early 2010's. Nicolas Paparoditis is an international expert of remote sensing, photogrammetric computer vision, and computer graphics for 3D geodata collection systems and their application to smart cities and more globally to public policies. He has supervised 20 PhDs and has published over hundred and fifty papers in the field of remote sensing, photogrammetry, and spatial information sciences mostly published in ISPRS journals and proceedings. He has also led several large national research and innovation projects around the development of technologies for 3D geodata collection, revisualization, digital globes and digital twins. Nicolas Paparoditis has been involved in ISPRS since 2000. He has been Chair of the ISPRS former Commission III (2008-2012), the XXIV ISPRS congress director (2016-2022). He is currently Vice-President of ISPRS (2022-2026) and Vice-President of EuroGeographics.



## Sisi Zlatanova

- Professor at University of New South Wales (UNSW), Australia
- President of ISPRS Technical Commission IV on Spatial Information Science (2016-2022 & 2022-2026)

**Biography:** Dr. Sisi Zlatanova is a SHARP Professor at the Faculty of Built Environment, UNSW, Sydney, Australia and the Director of the Geospatial, Research, Innovation and Development (GRID) cluster. She is also an adjunct professor at RMIT, Melbourne. She is a world-known researcher in 3D modelling and 3D data management and specifically in the conceptualization of 3D topological relationships. Her recent investigations focus on bringing together BIM and GIS, indoor and outdoor, above and below the surface to support the challenges of Digital Twins. She has been always pioneering in 3D research and development exploring innovative and more efficient approaches for 3D representations, management of data and analysis, trying to bridge the gap between different technologies. She has supervised more than 70 MSc and PhD students on topics related to the third dimension. She has been involved in and leading 3D projects for the Fire and Rescue NSW, Sydney, Australia; Port of Rotterdam, City of Rotterdam, Emergency response sector, the Netherlands; Data harmonization within Europe; Underground infrastructures, NYC, USA; indoor/outdoor navigation in China and South Korea. She has been advisor to many international projects, institutions and organization. She is an author of more than 600 scientific publications and an editor of 23 books. She is the founder of three international annual conferences namely 3DGeoInfo, Gi4DM and Indoor3D. She is an active member of ISPRS and OGC. She is the President of the ISPRS Commission IV ‘Spatial Information Science’ (2016-2020) and editor of OGC SWG IndoorGML.



## Maria Antonia Brovelli

- Professor at Politecnico di Milano (PoliMI), Italy
- Vice President of ISPRS Technical Commission IV on Spatial Information Science (2022-2026)

**Biography:** Maria Antonia Brovelli is a distinguished academic and researcher with a background in Physics and a Ph.D. in Geodesy and Cartography. She is a Professor of GIS, Earth Observation and The Copernicus Green Revolution for Sustainable Development at Politecnico di Milano (PoliMI). Having dedicated her entire career to PoliMI, she began as a researcher and later became a Full Professor, also serving as the Vice-Rector of PoliMI for the Como Campus. Her contributions extend beyond academia and currently she holds key positions in various international organizations. She serves as the Vice President of the ISPRS Technical Commission on Spatial Information Science, co-chair of the United Nations Open GIS Initiative, and former chair and current member of the Advisory Board of the UN-GGIM Academic Network. Additionally, she has been involved in ESA's Advisory Committee of Earth Observation (ACEO). Her research in geomatics covers diverse areas, including geodesy, radar-altimetry, GIS, webGIS, VGI, Citizen Science, Big Geo Data, and GEOAI. Brovelli is a global leader in Open-Source GIS. She has an impressive publication record and has been involved in numerous national and international research projects. Brovelli's recent research projects include collaborations in Horizon2020, Interreg, Erasmus+, and initiatives with organizations like ESA. Recognizing her contributions, she has received awards such as the ISPRS President's Honorary Citation in 2020 and the Sol Katz Award from OSGeo in 2015. She also holds editorial roles in reputable journals, emphasizing her influence and leadership in the field.

## Scientific Committee

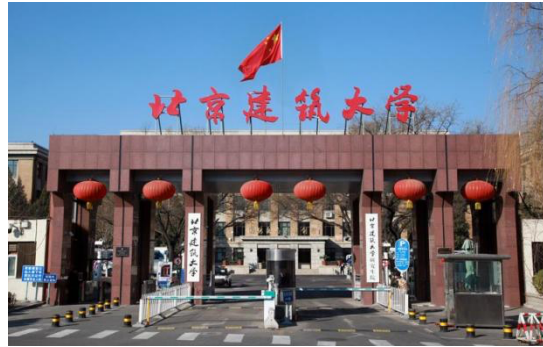
Jun CHEN	National Geomatics Center of China, China
Jie JIANG	ISPRS, China
Qin YAN	FIG, China
Sisi Zlatanova	University of New South Wales, Australia
Maria Antonia Brovelli	Politecnico di Milano, Italy
Zhilin LI	Moganshan Geospatial Information Laboratory, China
Songnian LI	Toronto Metropolitan University, Canada
Hao WU	National Geomatics Center of China, China
Xianglei LIU	Beijing University of Civil Engineering and Architecture, China
Qiang CHEN	Beijing University of Civil Engineering and Architecture, China
Bisheng YANG	Wuhan University, China
Tinghua AI	Wuhan University, China
Yan LI	Wuhan University, China
Qiang ZHU	Zhejiang University, China
Zhizhong KANG	China University of Geoscience, China
Li Zhang	Chinese Academy of Surveying and Mapping, China
Tengteng QU	Peking University, China
Xin HUANG	Wuhan University, China
Xian GUO	Beijing University of Civil Engineering and Architecture, China
Shisong CAO	Beijing University of Civil Engineering and Architecture, China
Pingbo HU	Beijing University of Civil Engineering and Architecture, China
Qiaoli WU	Beijing University of Civil Engineering and Architecture, China
Runjie WANG	Beijing University of Civil Engineering and Architecture, China
Yanan LIU	Beijing University of Civil Engineering and Architecture, China
Jiayi LI	Wuhan University, China

## Organizing Committee

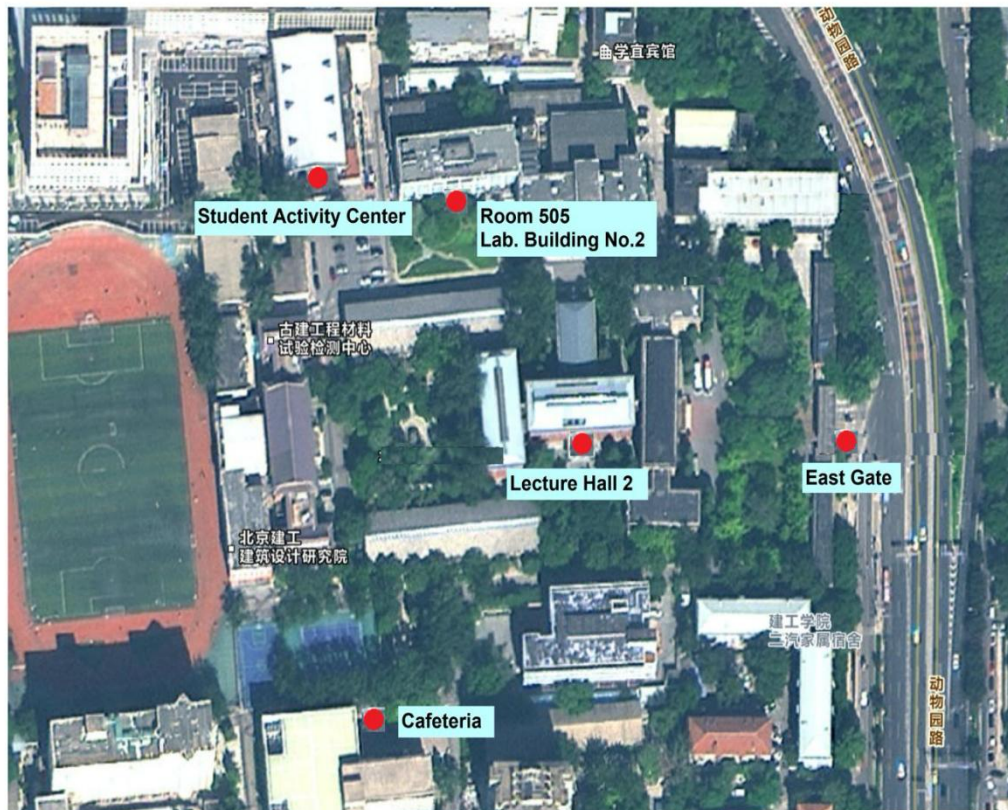
Xianglei LIU	Beijing University of Civil Engineering and Architecture, China
Hao WU	National Geomatics Center of China, China
Qiang CHEN	Beijing University of Civil Engineering and Architecture, China
Xian GUO	Beijing University of Civil Engineering and Architecture, China
Shisong CAO	Beijing University of Civil Engineering and Architecture, China
Pingbo HU	Beijing University of Civil Engineering and Architecture, China
Yi ZHANG	Beijing University of Civil Engineering and Architecture, China
Qiaoli WU	Beijing University of Civil Engineering and Architecture, China
Runjie WANG	Beijing University of Civil Engineering and Architecture, China
Yanan LIU	Beijing University of Civil Engineering and Architecture, China

## Venue

The International Workshop on Dynamic and Multi-dimensional GIS (9th DMGIS) will be held at the Xicheng Campus of Beijing University of Civil Engineering and Architecture (BUCEA). It is located at No.1 Exhibition Hall Road, just 32 kilometers from the Beijing Capital International Airport and 53 kilometers from the Beijing Daxing International Airport.



**Map of Xicheng Campus, Beijing University of Civil Engineering and Architecture**  
No.1 Zhanlanguan Road, Xicheng District, Beijing



### How to go to Xicheng Campus of BUCEA

#### ① Beijing Capital International Airport

- **Taxi:** About RMB 110 (USD \$ 15 including toll). The cost is subject to change depending on actual traffic conditions.
- **Airport Express & Subway:** Airport Express (get off at DongZhiMen) – Subway Line 2 (get off at XiZhiMen Station) – Subway Line 4 (get off at Dongwuyuan Station) – Walk to BUCEA about 600 meters.

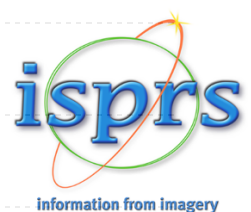
#### ② Beijing Daxing International Airport

- **Taxi:** About RMB 165 (USD \$ 23 including toll). The cost is subject to change depending on actual traffic conditions.
- **Airport Express & Subway:** Airport Express (get off at CaoQiao) – Subway Line 19 (get off at PingAnLi Station) – Subway Line 6 (get off at CheZhuangGongXi Station) – Walk to BUCEA about 600 meters.



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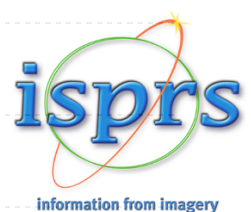
information from imagery





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information from imagery



## Introduction of BUCEA

As the one and only architectural university in Beijing, the Beijing University of Civil Engineering and Architecture (BUCEA) was formerly known as Capital Primary Industrial School, established by the Qing Dynasty Government in 1907. Jointly sponsored by the People's Government of Beijing Municipality and the Ministry of Housing and Urban-Rural Development of China, BUCEA is home to over 90,000 outstanding alumni.

As a multi-campus university, BUCEA now has two campuses - Xicheng and Daxing. With over 1170 faculty and staff and more than 11746 enrolled students, BUCEA offers 35 undergraduate programs, 14 master's degree programs and 6 doctoral degree programs.

BUCEA has 10 schools, 1 basic teaching institution, as well as School of International Education, School of Innovation and Entrepreneurship Education, and School of Continuing Education, with faculties in Architecture, Civil Engineering, Environment, Surveying and Mapping, Electrics, Mechanics, Management, Law, and Science, etc.

To better serve China's national strategy and Beijing's function as Center for International Exchanges, BUCEA has set up the Belt and Road International Urban Innovation Center and 7 international innovation cooperation platforms with 100+ universities and research institutions across 51 countries and regions for pragmatic academic exchanges and joint research. The university has proposed establishing the BRAUIC, Belt and Road Architectural University International Consortium, committed to building it into a world-famous specialized international university alliance. Nearly 1000 Chinese and international students have benefited from Sino-foreign Cooperatively-running Programs and programs.

Under the leadership of the university administration, BUCEA is dedicated to the mission of cultivating talents with morals and the positioning of a top-notch featured seeking to serve the capital's drive to become a major world center for science and innovation and build itself into a top-notch, inclusive and innovative university in China with worldwide recognition and a great emphasis on architectural education.



