



Digital Earth & Space

Sep.23 Saturday, Grand Ballroom II , 3F	
Presider: Nan Chi, School of Information Science and Technology, Fudan University	
13:30-14:00 (Keynote)	Infrared Intellectual Perception and Space Metaverse Shengli Sun Shanghai Institute of Technical Physics, Chinese Academy of Sciences
14:00-14:30 (Keynote)	Intelligent interpretation of remotely sensed big data Bing Zhang Aerospace Information Research Institute, Chinese Academy of Sciences
14:30-15:00 (Keynote)	From Earth to Deep Space Objects: Recent Advance in Remote Sensing and Mapping Xiaohua Tong Tongji University
Presider: Rong Shu, Shanghai Institute of Technical Physics, Chinese Academy of Sciences	
15:00-15:20 (Invited)	Improving space asset management and collision avoidance capabilities through high-precision visualization of space target situation deduction Ke Zhang GeovisTT&CTechnologyCo., Ltd
15:20-15:40 (Invited)	Building a globally leading integrated satellite constellation to serve the high-quality development of the digital economy Dongsheng Liu PIESAT Company
15:40-16:00 (Invited)	Intelligent Satellite Processing Technology and Application in Blue Carbon Economy Zhiyu Yan Zhuhai Aerospace Microchips Science & Technology Co., Ltd.
Presider: Jianhua Gong, Aerospace Information Research Institute, Chinese Academy of Sciences	
16:00-16:30	Panel Discussion
16:30-16:50 (Invited)	Application of artificial intelligence to smart city construction from a spatial perspective Xiang Li East China Normal University
16:50-17:10 (Invited)	Perceptual interaction of generalized point cloud for intelligent construction of large-scale infrastructure Chun Liu Tongji University
17:10-17:20	ESIT2023-0809-33 Joint geometric calibration using multiple images for linear array optical imaging satellite Hao Wu ^{1,2} , Shijie Liu ^{1,2} , Xiaohua Tong ^{1,2} 1.College of Surveying and Geo-Informatics, Tongji University, China; 2.Shanghai Key Laboratory for Planetary Mapping and Remote Sensing for Deep Space Exploration, Tongji University, China
17:20-17:30	ESIT2023-0808-34 Research on the Concept and Key Issues of Aerospace Metaverse Zhong Wang; Shengli Sun; Rui Chen; Tijun Ma; Wenjun Xu; Yafeng Zhang Shanghai Institute of Technical Science



17:30-17:40	ESIT2023-0825-4 An Instant Neural Rendering and 3D Reconstruction Method and Its Application in Outdoor Scenes Jiangfeng She, Shuangpin Wu School of Geography and Ocean Sciences, Nanjing University
17:40-17:50	ESIT2023-0809-25 Digital twin based high-precision deformation monitoring method for complex structures Tianhe Gao, Kuo Tian, Xuanwei Hu, Yiwei Huang Dalian University of Technology
Sep.24 Sunday, Grand Ballroom II , 3F	
Presider: Xiaoping Du, Aerospace Information Research Institute, Chinese Academy of Sciences	
8:30-9:00 (Keynote)	A Primary Exploration of Geographic Metaverse from the Perspective of Virtual Geographic Environment Jianhua Gong Aerospace Information Research Institute, Chinese Academy of Sciences
9:00-9:20 (Invited)	Lightweight Mobile Web3D Key Technology for Massively Multi-player Online Metaverse Platform Jinyuan Jia Smart 3D Lab WebSite, School of Software, Tongji University
9:20-9:40 (Invited)	Next-Generation Urban Management: When Human Mobility Modeling Meets AI and Big Data Xuan Song Southern University of Science and Technology
9:40-10:00 (Invited)	Simulation Technology Driven by Digital Twin of Infrared Payloads Peng Rao Shanghai Institute of Technical Physics, Chinese Academy of Sciences
10:00-10:10	ESIT2023-0726-2 Structural strength digital twin modeling method Kuo Tian Dalian University of Technology
10:10-10:20	ESIT2023-0814-1 A Geometry-Based Method for Visualizing Time-varying Flow Fields on Map Platforms Using Texture Polymorphism Yucheng Shu, Songshan Yue Nanjing Normal University
10:20-10:35	Coffee Break
Presider: Xuan Song, Southern University of Science and Technology	
10:35-10:55 (Invited)	Urban Sensing and Simulation with AI and Spatiotemporal Big Data Qingfeng Guan China University of Geosciences, Wuhan
10:55-11:15 (Invited)	6G-oriented visible light communication Ziwei Li Fudan University



11:15-11:35 (Invited)	Digital Earth Science Platform Supporting the SDG Applications: Cases, Challenges and Opportunities Xiaoping Du Aerospace Information Research Institute, Chinese Academy of Sciences
11:35-11:45	ESIT2023-0808-2 Imaging simulation and analysis of attitude jitter effect on topographic mapping for lunar satellite stereo optical cameras Chen Chen ^{1,2} ; Shijie Liu ^{3,4*} ; Zhen Ye ^{3,4} ; Xiaohua Tong ^{3,4} 1.College of Surveying and Geo-Informatics, Tongji University; 2.Shanghai Key Laboratory for Planetary Mapping and Remote Sensing for Deep Space Exploration, Tongji University; 3.College of Surveying and Geo-Informatics, Tongji University; 4.Shanghai Key Laboratory for Planetary Mapping and Remote Sensing for Deep Space Exploration, Tongji University
11:45-11:55	ESIT2023-0808-20 Advancements in Digital Twin Technology for Simulation and Health Prediction of Infrared Optomechanical System Xiaozhuo wang Shanghai Institute of Technical Physics of the Chinese Academy of Sciences
11:55-12:05	ESIT2023-0912-1 The Digitization Concept of Fusion Sensing Equipment based on Complex Systems Haibin Sun Key Laboratory of Intelligent Infrared Perception Chinese Academy Science (CAS), Shanghai Institute of Technical Physics, Chinese Academy Science (CAS), Shanghai 200043, China
Presider: Haibin Sun, Shanghai Institute of Technical Physics, Chinese Academy of Sciences	
13:30-13:50 (Invited)	Revolutionizing Urban Mobility: The powerful combination of AIGC and City Simulators Yong Li Tsinghua University
13:50-14:00	ESIT2023-0809-14 A constant bank angle based two-stage predictor-corrector method for Mars atmospheric entry Zhixian Luo ^{1,2} , Yanmin Jin ^{1,3*} , Xiaohua Tong ^{2,4} 1.College of Surveying and Geo-Informatics, Tongji University, China; 2.Shanghai Key Laboratory of Space Mapping and Remote Sensing for Planetary Exploration, China; 3.Shanghai Key Laboratory of Space Mapping and Remote Sensing for Planetary Exploration, China; 4.College of Surveying and Geo-Informatics, Tongji University, China
14:00-14:10	ESIT2023-0809-2 High fidelity digital human generation method based on polarization gradient light images Shuo Huang ^{1*} , Hongyi Bu ² , Yong Hu ¹ , Cailan Gong ¹ , Zixuan Han ¹ , Han Wang ¹ 1.Shanghai institute of technical physics, China; 2.Jiaxing super dimensional Information Technology Co., LTD, China
14:10-14:20	ESIT2023-0807-13 Stereo matching for lunar surface reconstruction with an improved census cost Miyu Zhou; Zhen Ye; Yusheng Xu; Rong Huang; Xiaohua Tong Tongji University
14:20-14:30	ESIT2023-0808-12 Numerical validation of lunar subsurface dielectric property estimation based on full waveform inversion Shurui Chen, Feng Yongjiu Tongji University
14:30-14:40	ESIT2023-0817-2 Remote Sensing Image Classification by Integrating Multiple Feature Parameters Jintao Liang ¹ , Chao Chen ^{2*} , Zhisong Liu ¹ , Yankun Chen ¹ 1.Zhejiang ocean university, China; 2.Suzhou University of Science and Technology, China



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14:40-14:50	<p>ESIT2023-0822-1 Farmland Boundary Extraction from Remote Sensing Imagery Based on Segment Anything Model Mengyu Hu^{1,2}, Jianhua Gong^{1,2,3*}, Dongqing Cao^{1,2}, Yousong Zhang⁴, Jianru Wang⁴, Weidong Hu³, Hongchao Cai⁵, Dongchuan Wang⁵ 1.Aerospace Information Research Institute (AIR), Chinese Academy of Sciences, China; 2.University of Chinese Academy of Sciences, China; 3.Zhejiang-CAS Application Center for Geoinformatics, China; 4.Zhejiang Marine and Fishery Law Enforcement Corps, China; 5.School of Geology and Geomatics, Tianjin Chengjian University, China</p>
14:50-15:00	<p>ESIT2023-0813-2 Multi-perspective regional continuity alignment network for hyperspectral-LiDAR image fusion and classification Weixin Ding, Wenbo Yu, Xiao Chen, He Huang Soochow University</p>
15:00-15:10	<p>ESIT2023-0807-14 Potential and performance for classifying land surface only with ICESat-2 altimetric data Yuan Sun^{1;2};Huan Xie^{1;2*};Qi Xu^{1;2};Binbin Li^{1;2};Peiqi Huang^{1;2};Changda Liu^{1;2};Min Ji^{1;2};Xiaohua Tong^{1;2} 1.College of Surveying and Geo-Informatics, Tongji University, China;2.Shanghai Key Laboratory of Space Mapping and Remote Sensing for Planetary Exploration, China</p>