Remote Sensing and Space Exploration

Sep.23 Saturday, Meeting Room 1, 3F	
Presider: Zhiping He, Shanghai Institute of Technical Physics, Chinese Academy of Sciences	
13:30-14:00 (Keynote)	**Up-view visual-based indoor ranging method utilizing a smartphone** Yuwei Chen FGI, Finnish Geospatial Research Institute
14:00-14:30 (Keynote)	**Radiation sensitivity enhancement technology of wide Swath Thermal Infrared Imager** Pengmei Xu China Academy of Space Technology
14:30-14:50 (Invited)	**Research on Laser Ranging of Space Debris** Yuqiang Li Yunnan Observatories, CAS
14:50-15:10 (Invited)	**Space and industrial applications of Infrared hyperspectral instruments** Mingjian Gu Shanghai Institute of Technical Physics, Chinese Academy of Sciences
15:10-15:25	Coffee Break
Presider: Xiuqing Hu, National Satellite Meteorological Centre	
15:25-15:45 (Invited)	**Recent progress of airborne high sensitivity infrared remote sensing** Yueming Wang Shanghai Institute of Technical Physics, Chinese Academy of Sciences
15:45-16:05 (Invited)	**Space-borne Aerosol and Carbon dioxide Detection Lidar (ACDL) Development and In-orbit Measurements** Jiqiao Liu Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences
16:05-16:25 (Invited)	**Research on Interpretability of Machine Learning Models in Landslide Susceptibility Mapping** Tao Chen China University of Geosciences/School of Geophysics and Geomatics
16:25-16:35	**ESIT2023-0810-1** **Spectral Imaging for Lunar Orbit Exploration: Research Status and Technical Challenges** Zhiping He, Yuhua Gui, Jinning Li, Gang Lv, Rui Xu, Meizhu Wang Shanghai Institute of Technical Physics, Chinese Academy of Sciences
16:35-16:45	**ESIT2023-0807-9** **Urban Tree species Classification Using multispectral Airborne Laser Scanning Data** Peilun Hu[1, 2], Yuwei Chen[2*], Juha Hyyppä[2], Markus Holopainen[1] 1.Unversity of Helsinki, Finland; 2.Finnish Geodetic Spatial Institute, Finland
16:45-16:55	**ESIT2023-0808-33** **A semi-empirical model for soil moisture content retrieval based on KM model** Lihan Chen[1], Kun Tan[2*], Xue Wang[2] 1.China University of Mining and Technology, China; 2.East China Normal University, Afghanistan
16:55-17:05	**ESIT2023-0807-8** **Simulation of the Temperature in the Permanent Shadowed Region of the Moon's South Pole and Influence on Water-Ice Distribution** Zhengling Yin, Niutao Liu, Yaqiu Jin Fudan University
17:05-17:15	**ESIT2023-0808-30** **Hyperspectral Feature Selection for SOM Estimation Based on Weighted Marine Predator Algorithm** Libin Zhu, Kun Tan, Xue Wang East China Normal University, China

Remote Sensing and Space Exploration Parallel Session Sep.23 Saturday, Meeting Room 3	
Presider: Lifu Zhang, Aerospace Information Research Institute,Chinese Academy of Sciences	
13:30-14:00 (Keynote)	**天地联合观测的月球辐射模型改进及定标应用** Xiuqing Hu National Satellite Meteorological Centre
14:00-14:30 (Keynote)	**Progress and prospect of lunar remote sensing image positioning and mapping: From hectometer to centimeter scales** Kaichang Di Aerospace Information Research Institute,Chinese Academy of Sciences
14:30-14:50 (Invited)	**Research progress of hyperspectral radiance temperature standard of infrared remote sensing** Xiaopeng Hao National Institute of Metrology, China
14:50-15:10 (Invited)	**Far Infrared Technique of Thermal Emission Spectrometer of Tianwen-2** Weigang Wang China Academy of Space Technology
15:10-15:25	Coffee Break
Presider: Kaichang Di, Aerospace Information Research Institute,Chinese Academy of Sciences	
15:25-15:55 (Keynote)	**Information chain modeling and intelligent processing techniques for hyperspectral remote sensing** Huijie Zhao Beihang University
15:55-16:15 (Invited)	**State-of-the-art laser spectroscopy sensing techniques and applications** Jinsong Li Anhui University
16:15-16:35 (Invited)	**Time-resolved Raman Spectroscopy and Its Applications in deep space** Bin Xue Xi'an Institute of Optics and Precision Mechanics,Chinese Academy of Sciences
16:35-16:45	**ESIT2023-0824-1** **Spatial–Spectral Joint Hyperspectral Anomaly Detection Based on a Two-Branch 3D Convolutional Autoencoder** Shuai Lv Shanghai Institute of Technical Physics, Chinese Academy of Sciences
16:45-16:55	**ESIT2023-0819-4** **Research on Hyperspectral LiDAR and its Application** Hui Shao Anhui Jianzhu university
16:55-17:05	**ESIT2023-0828-2** **Architecting in-orbit reconfigurable intelligent surfaces for satellite metaverse infrastructure** Janne Heilala University of Turku, Finland
17:05-17:15	**ESIT2023-0828-13** **车载式可见短波高光谱成像系统数据预处理** Zhang Xiangyue, Zhang Dong, Wang Yueming Shanghai Institute of Technical Physics, Chinese Academy of Sciences

Sep.24 Sunday, Meeting Room 1, 3F	
Presider: Yuwei Chen, FGI, Finnish Geospatial Research Institute	
8:30-9:00 (Keynote)	**Aeronautical-Aerospace Hyperspectral remote sensing image processing** Yanfeng Gu Harbin Institute of Technology
9:00-9:30 (Keynote)	**Possible Sites for Tianwen-3 Mission in Utopia Planitia** Zhizhong Kang China University of Geosciences Beijing
9:30-9:50 (Invited)	**Infrared Video Spectral Imaging Technology for Moving Target Monitoring** Chunlai Li Shanghai Institute of Technical Physics, Chinese Academy of Sciences
9:50-10:10 (Invited)	**Miniature Snapshot Spectropolarimetric Imaging for Remote Sensing** Tingkui Mu Xi'an Jiaotong University
10:10-10:25	Coffee Break
Presider: Yanfeng Gu, Harbin Institute of Technology	
10:25-10:45 (Invited)	**Research progress of space photoelectric detection and on-orbit servicing technology** Yunmeng Liu Shanghai Institute of Technical Physics, Chinese Academy of Sciences
10:45-11:05 (Invited)	**In-situ hyperspectral data processing and analysis for Yutu-2 rover** Sicong Liu Tongji University
11:05-11:25 (Invited)	**Life Science Experimental Technology and Application on the Chinese Space Station** Weibo Zheng Shanghai Institute of Technical Physics, Chinese Academy of Sciences
11:25-11:35	**ESIT2023-0817-1** **Simulation and Experiment of the Impact of Microvibration Imaging on Refrigerator Based on Sensitivity Matrix** YONG LIU Beijing Institute of space Mechanics & Electricity
11:35-11:45	**ESIT2023-0812-2** **Reflective Tomography Lidar Technology for Extra Long Distance Space Target Exploration** Xinyuan Zhang[1], Yihua Hu[1*], Yuwei Chen[2] 1.National University of Defense Technology, China; 2.Finnish Geospatial Research Institute, Finland
11:45-11:55	**ESIT2023-0809-21** **A comprenhensive in-situ near-infrared spectral study of various Fe-content olivine** Ziyu Wang[1], Honglei Lin[2*], Binlong Ye[3], Yuyan Zhao[4] 1.Institute of Geology and Geophysics, Chinese Academy of Sciences, China; 2.Key Laboratory of Earth and Planetary Physics, Institute of Geology and Geophysics, Chinese Academy of Sciences, China; 3.Department of Earth Sciences, University of Hong Kong, China; 4.Center for Lunar and Planetary Sciences, Institute of Geochemistry Chinese Academy of Sciences, Guiyang, China
11:55-12:05	**ESIT2023-0809-20** **Development of a user-specified benchmark temperature control algorithm on blackbody with temperature stability of 1.0 mK for spectral analysis of spaceborne system** Chun Lai Li[1, 2*], Shi Jie Liu[2*], Pu Jiang Huang[2], Wen Hang Yang[2], Shou Zheng Zhu[2], Bang Jian Zhao[2], Ke Jin[2], Hai Jun Jin[2] 1.Shanghai Institute of Technical Physics, Chinese Academy of Sciences, China; 2.Hangzhou Institute for Advanced Study,UCAS, China

Remote Sensing and Space Exploration Parallel Session Sep.24 Sunday, Meeting Room 3	
Presider: Hongxia Mao, CASIC207	
8:30-9:00 (Keynote)	**光学遥感卫星观测数据在目标特性研究领域应用探讨与思考** Hongxia Mao CASIC207
9:00-9:30 (Keynote)	**Processing of Mars in-situ LIBS spectra and method study for detection of elements related to the habitability and life on Mars** Jin Yu Shanghai Jiao Tong University
9:30-9:50 (Invited)	**Radar Scattering Properties of the Moon and Factors for Anomalous Radar Echoes** Wenzhe Fa Peking University
9:50-10:10 (Invited)	**Lunar and Planetary Spectroscopy Studies** Yunzhao Wu Purple Mountain Observatory, Chinese Academy of Sciences
10:10-10:25	Coffee Break
Presider: Zhizhong Kang, China University of Geosciences Beijing	
10:25-10:45 (Invited)	**Simulation of the thermal emission from lunar surface and the application in the calibration of radiometers** Niutao Liu Fudan University
10:45-11:05 (Invited)	**A New Brightness Temperature Mapping Method of the Moon Using Chang'e-2 Microwave Radiometer Data** Zhiguo Meng Jilin University
11:05-11:25 (Invited)	**Infrared hyperspectral technology and its application in deep space exploration** Liyin Yuan Shanghai Institute of Technical Physics, Chinese Academy of Sciences
11:25-11:35	**ESIT2023-0828-6** **Comparison of lunar irradiance models and validation of lunar observation on Earth** RUI DAI, SHENGBO CHEN Jilin University
11:35-11:45	**ESIT2023-0828-5** **Analysis of Water Environment Evolution within the Zhurong Landing Area by Integrating Spectral and Morphological Information** Juan Xie[1, 2, 3], Boxun Zhang[1, 2, 3], Xiaojian Xu[1, 2, 3], Zhizhong Kang[1, 2, 3] 1.School of Land Science and Technology, China University of Geosciences (Beijing), China; 2.Research Center of Lunar and Planetary Remote Sensing Exploration, China University of Geosciences (Beijing), China; 3.Subcenter of International Cooperation and Research on Lunar and Planetary Exploration, Center of Space Exploration, Ministry of Education of the People's Republic of China, China
11:45-11:55	**ESIT2023-0808-13** **Design and Spectral analysis of Short and Medium wave infrared filter for HRD** Chen Yong Beijing Institute of Space Mechanics & Electricity
11:55-12:05	**ESIT2023-0807-4** **Software design for quantum efficiency calculation of infrared focal plane detectors** Xin Chen, yong Chen, Xuguang Deng, Jiushuang Zhang, Weidong Lv, Tong Weiming Beijing Institute of Space Mechanics &Electricity

Sep.24 Sunday, Meeting Room 1, 3F	
Presider: Jin Yu, Shanghai Jiao Tong University	
13:30-14:00 (Ketnote)	**Dynamic monitoring on global sand lands and its sustainable development evaluation** Shihong Du Peking University
14:00-14:20 (Invited)	**A BRDF correction method for hyperspectral image with normalized multiple imaging conditions** Kun Tan East China Normal University
14:20-14:40 (Invited)	**High resolution remote sensing national greenhouse extraction and its application for disaster assessment** Ailong Ma Wuhan University
14:40-14:55	Coffee Break
Presider: Yunmeng Liu, Shanghai Institute of Technical Physics, Chinese Academy of Sciences	
14:55-15:15 (Invited)	**Techniques of Hyperspectral Image Deep Representation Learning** Yan Wang East China Normal University
15:15-15:25	**ESIT2023-0825-1** **Self-supporting Prototype Denoising-guided for Few-Shot Remote Sensing Segmentation** Weihao Shen, Ailong Ma, Yanfei Zhong State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing, Wuhan University, China
15:25-15:35	**ESIT2023-0808-24** **Thermal Removal Method for Chang'e-5 Multispectral Data Using a Heat Conduction Model and Real Terrain** Li Jinning Shanghai Institute of Technical Physics, Chinese Academy of Sciences
15:35-15:45	**ESIT2023-0806-2** **A total precipitable water fusion algorithm by considering microwave and optical remote sensing observations** Dabin Ji[1*], Qixiang Sun[1], Shi Jiancheng[2] 1.Aerospace Information Research Institute, Chinese Academy of Sciences, China; 2.National Space Science Center, Chinese Academy of Sciences, China
15:45-15:55	**ESIT2023-0802-4** **Design and implementation of multi-load refrigeration controller for infrared remote sensing camera** Yu Wang Beijing Institute of Space Mechanics& Electricity
15:55-16:05	**ESIT2023-0911-1** **Reduction of blocking artifacts for highly compressed images Based on Wavelet Transform** Qiu Feng LV Beijing Institute of Space Mechanics & Electricity
16:05-16:15	**ESIT2023-0915-2** **Precise determination of organic and inorganic carbons in a Martian soil simulant under the Martian CO2 atmosphere** Chen Sun School of Physics and Astronomy, Shanghai Jiao Tong University