

**2025 Macau International Forum on Space and  
Planetary Sciences**

2025 澳門太空與行星科學國際論壇

# Scientific Organization Committee (SOC)

## *Honorary Chairs:*

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Aoao XU (Emeritus President of Macau University of Science and Technology)

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Alberto CELLINO (INAF-OAT)

Pengfei CHEN (Nanjing University)

Pascale EHRENFREUND (International Space University)

Mohamed Ramy EL-MAARRY (Khalifa University)

Bernard FOING (European Space Agency)

Jianghui JI (Purple Mountain Observatory, Chinese Academy of Sciences)

Xiongyao LI (Institute of Geochemistry, Chinese Academy of Sciences)

Yang LI (Institute of Geochemistry, Chinese Academy of Sciences)

Yang LIU (National Space Science Center, Chinese Academy of Sciences)

Yoshizumi MIYOSHI (Nagoya University)

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Robert RANKIN (University of Alberta)

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Yan SU (National Astronomical Observatories, Chinese Academy of Sciences)

Hui TIAN (School of Earth and Space Sciences, Peking University)

Dedong WANG (Helmholtz-Centre Potsdam - German Research Centre for Geosciences)

Linghua WANG (Peking University)

Yong WEI (Institute of Geology and Geophysics, Chinese Academy of Sciences)

Long XIAO (China University of Geosciences (Wuhan))

Zhiyong XIAO (Sun Yat-sen University)

Zhonghua YAO (Hong Kong University)

Chao YUE (Peking University)

Zhaoguo HE (Macau University of Science and Technology)

Xiaoping ZHANG (Macau University of Science and Technology)

Menghua ZHU (Macau University of Science and Technology)

## **Local Organization Committee (LOC)**

Yi XU, Zhaoguo HE, Choiwa LAM, Weishan JIN, Iaohong LAO, Wengwai CHAN, Yinshen GU, Xiaojun XU, Lei JIN

## Keynote Speakers

### Anil Bhardwaj



Prof. Anil Bhardwaj joined Indian Space Research Organisation (ISRO) in 1993 as a scientist at the Space Physics Laboratory (SPL) of the Vikram Sarabhai Space Centre (VSSC) in Trivandrum. He became the Head of the newly formed Planetary Science Branch of SPL in August 2007, and was subsequently the Director of SPL during February 2014 to February 2017. Since 2017, he has been the Director of Physical Research Laboratory (PRL). He has worked at NASA Marshall Space Flight Centre, USA, for about 2 years as National Academy of Science (NRC)

Senior Research Associate during 2004-2005.

Prof. Bhardwaj initiated the research in planetary science at SPL and contributed to the development of planetary science program in ISRO/Department of Space, and planning of planetary missions of India. He was the Principal Investigator (PI) of SARA experiment on the first Indian Lunar mission Chandrayaan-1, which has revolutionized our understanding on the interaction of solar wind with the Moon through several new findings. He was the PI of MENCA experiment on the Indian Mars Orbiter Mission (MOM). He and his team have PI-lead experiments on Chandrayaan-2 Orbiter, and Chandrayaan-3 Lander and Rover missions, as well as solar mission Aditya-L1. He has been an observer on Chandra and XMM-Newton X-ray Observatories, Hubble Space Telescope, and Giant Meterwave Radio Telescope (GMRT). His primary research field is planetary and space sciences, and solar system exploration. He has made outstanding contributions in the field of solar system X-ray astronomy, including discovery of X-rays from the rings of Saturn and X-ray flares from Jupiter and Saturn, and theoretical modelling of aurora and airglow emissions and photochemistry in planetary upper atmospheres and ionospheres and comets.

Prof. Bhardwaj is an elected Fellow of all the three National Science Academies in India, and of many other Academies/Societies, and has received recognition at both national and international level – including two most coveted science awards – Shanti Swarup Bhatnagar Prize (2007) and Infosys Prize (2016). He is also a recipient of INSA-Vainu Bappu Memorial International Award (2016), Decennial Award of Indian Geophysical Union (2017), J.C. Bose National Fellowship (2019), Prof. M. G. K. Menon Lecture Award of NASI (2021), AOGS Fellowship and INSA Distinguished Lecture Fellowship (2023), to name a few.

In 2024, he has received the coveted Vikram Sarabhai Medal of COSPAR, and the International Academy of Astronautics, Basic Sciences Section Award. Prof. Bhardwaj is revered by ISRO in 2017 with highest in-service award – The Outstanding Achievement Award.

## Alberto Cellino



Alberto Cellino was born on January 11, 1958 in Torino (Italy). After graduating in Physics at the Torino University he entered the staff of the Torino Astrophysical Observatory. He has worked primarily in the field of the physical properties of the small bodies of the Solar System, in particular the asteroids. In the 90s, he became a leading expert in the field of asteroid family studies. His investigations were important to identify families in the space of the orbital proper elements, and then to derive for them some basic physical information including the size distribution and the reconstruction of the original ejection velocity fields of their members. In addition, he worked on models of the collisional evolution of the asteroid main belt, and contributed to the development of a semi-empirical model of the outcomes of catastrophic break-up events.

In 2008, he led an International Team at the International Space Science Institute (ISSI) of Bern, carrying out investigations on light scattering mechanisms, leading to the development of a new photometric system for asteroid magnitudes (H, G1, G2).

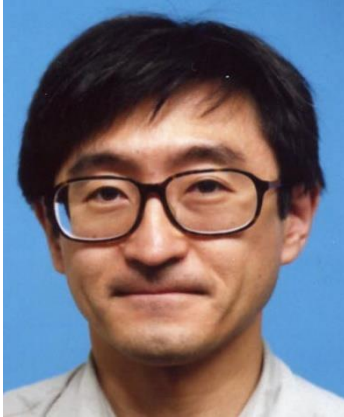
On the observational side, A. Cellino has been active in asteroid photometry and spectroscopy. In the field of asteroid polarimetry, he set up collaborations with colleagues in France and Argentina, using photo-polarimeters built in Torino. These observations led to the discovery of the unusual polarimetric behaviour of (234) Barbara, the prototype of a new class of objects exhibiting anomalously large inversion angles of polarization (the so-called “Barbarian” objects).

In the field of space activities, he developed some software needed to perform data processing and analysis for the Gaia space mission of the European Space Agency. In particular, he developed a genetic algorithm for the inversion of Gaia sparse photometric data to derive spin and shape properties for small solar system objects.

Member of IAU Commission 15, he has been the Chairman of the Minor Planet Working Group of this Commission in 2000 - 2003. In 2006, he became Vice-president of IAU Commission 15 and, in the 2009 -2012 triennium, President of this Commission.

The results of the research activity are published in 245 peer-reviewed articles in important journals devoted to planetary sciences (source: Astrophysical Data System, December 2024). He has been one of the Editors of the Asteroids III book (2002). As an acknowledgement of the research activities mentioned above, asteroid (3857) is named Cellino.

## Yoshifumi Saito



Prof. Yoshifumi Saito research activities have been related to rocket and satellite experiments for the study of space plasmas in the ionosphere and magnetosphere. He has participated in developments of the space-borne instruments for hot plasma and low-energy particle measurements. Based on the data obtained by the rocket and satellite experiments. He has studied elementary processes for transport and acceleration of charged particles in the space plasmas and the global energetics and electrodynamics of the magnetospheric plasmas.

He is a Principal Investigator of the Plasma Angle energy and Composition Experiments (PACE) on the KAGUYA(SELENE) satellite that was launched in September 2007. PACE completed its ~1.5-year plasma observation around the Moon in June 2009. He is now enjoying analyzing new lunar plasma data nobody has ever observed. The scientific objectives of PACE are 1) to measure the ions sputtered from the lunar surface and the lunar atmosphere, 2) to measure the magnetic anomaly on the lunar surface using two ESAs and a magnetometer onboard SELENE simultaneously as an electron reflectometer, 3) to resolve the Moon - solar wind interaction, 4) to resolve the Moon - Earth's magnetosphere interaction, and 5) to observe the Earth's magnetotail.

He has also been developing Plasma/Particle instruments for Mercury Magnetospheric Orbiter (BepiColombo/MMO) that will be launched in October 2018. BepiColombo is a joint mission between European Space Agency and Japan Aerospace Exploration Agency. He is a Principal Investigator of one of the payload instruments: MPPE (Mercury Plasma/Particle Experiment).

He has also been responsible for developing low energy ion analyzers (FPI-DIS) on NASA's MMS spacecraft that was launched in March 2015. He is starting to analyze plasma data newly obtained in the Earth's magnetotail.

Recently, He has started to develop a mass spectrometer for planetary surface materials preparing for the future planetary lander missions.

## Christian Wöhler



Prof. Dr. Christian Wöhler is a professor at the Faculty of Electrical Engineering and Information Technology in the Image Analysis Group at TU Dortmund University, Germany. He holds a background in physics, having studied at Julius-Maximilians-Universität Würzburg and Université Joseph Fourier, Grenoble, and obtained his Doctor of Natural Sciences from the University of Bonn. Christian spent a decade as a Senior Researcher at DaimlerChrysler Research Centre Ulm, focusing on environmental perception, before transitioning into academia where he also achieved *venia legendi* (habilitation) in applied computer science at Bielefeld University.

His research areas encompass image-based 3D surface reconstruction, planetary imaging spectroscopy, and the application of machine learning techniques. Prof. Wöhler has made significant contributions to industrial metrology systems, planetary remote sensing, and the creation of high-resolution topographic maps of lunar and Martian surfaces. He developed a Bayesian spectral unmixing framework for deriving mineral abundances from lunar near-infrared spectra. Furthermore, he has been involved in several international space missions as a Co-Investigator (Co-I), including ESA's BepiColombo mission, the Korea Pathfinder Lunar Orbiter, and the Emirates Lunar Mission.

Prof. Wöhler has authored 183 peer-reviewed publications, comprising 95 journal articles and 88 conference papers, and has written two Springer monographs—one on 3D computer vision and another on lunar domes. His work highlights his expertise in image analysis and processing, planetary science, and machine learning applications.

## Yuri Amelin



Prof. Yuri Amelin is a Research Professor at the Guangzhou Institute of Geochemistry, Chinese Academy of Sciences, and an Honorary Associate Professor at the Research School of Earth Sciences, Australian National University. He worked in the field of geochronology and isotope geochemistry since 1983 at the Institute of Precambrian Geology and Geochronology, Royal Ontario Museum, Geological Survey of Canada, and the Australian National University. Yuri's research interests cover a broad range of topics in geochronology and geochemistry, including but not limited to formation and early evolution of the solar system, early evolution of the Earth's crust and mantle, precise calibration of the geological timescale, decay constants of radionuclides, and natural and instrumental fractionation of isotopes. He has always been keen at developing new techniques, applications, and instrumentation aimed at achieving the highest possible precision and accuracy in isotopic dating, isotopic analysis, and analytical geochemistry.



## Xinlin Li



Dr. Xinlin Li received his BS degree from the University of Science and Technology of China in 1982, a MS degree in physics from the Shanghai Institute of Optics and Fine Mechanics in 1985, and a Ph.D. degree in Physics from Dartmouth College in 1992.

Following his doctorate, Dr. Li spent eight years as a postdoctoral researcher and research associate at Dartmouth College and later at the University of Colorado (CU) Boulder. He then joined CU as a faculty member in the Laboratory for Atmospheric and Space Physics (LASP) and the Department of Aerospace Engineering Sciences, where he currently serves as a

Full Professor.

Dr. Li's expertise lies in solar wind energy coupling into Earth's magnetosphere, energetic particle dynamics within the solar system, and Earth's magnetosphere, as well as instrument development and CubeSat missions. He has led two successful CubeSat missions: the NSF-funded Colorado Student Space Weather Experiment (CSSWE), operational from September 2012 to December 2014, and the NASA-funded Colorado Inner Radiation Belt Experiment (CIRBE), operational from April 2023 to October 2024. His work with CSSWE data culminated in a high-impact publication in *Nature* in 2017.

In addition to his mission leadership, Dr. Li spearheaded the development of the Medium Energy Electron Telescope (MEET), a NASA-funded instrument designed to measure electrons in the 30–800 keV energy range.

He has authored or co-authored over 250 peer-reviewed publications and is widely recognized for his contributions to space physics.

In 2021, Dr. Li was honored as a Fellow of the American Geophysical Union (AGU).



# Registration

## Registration Time:

Jan. 7/12:00-18:00

Jan. 8/14:00-18:00

Jan. 9/09:00-17:00

Jan. 10/09:00-12:00

## Registration Venue:

1<sup>st</sup> floor, Block N, Macau University of Science and Technology

# Program

## Opening Ceremony

2025.01.08 Morning 10:00-10:40 Venue: MUST N101			
Welcome Speeches 10:00-10:10 Macao Science and Technology Development Fund 10:10-10:20 Representative of the Organizer 10:20-10:30 Chair of the Forum			
Conference Group Photo 在座位上集體合影 10:30-10:40			
Coffee break 10:40-11:00			
11:00-12:00	Prof. Anil Bhardwaj (Keynote Speech)	Physical Research Laboratory (PRL), India	Indian Planetary and Space Missions
12:00-14:00 Lunch Venue: 1 <sup>st</sup> floor, Block O 地點: O座一樓廚藝天地			

### Program A (Space Physics)

Time & Venue:

	Jan. 8 Wednesday	Jan. 9 Thursday	Jan. 10 Friday
Morning	Opening Ceremony Keynote Speech MUST N101 澳門科技大學 N 座 101	Keynote Speech Oral Presentations MUST N212 澳門科技大學 N 座 212	Keynote Speech Oral Presentations MUST N212 澳門科技大學 N 座 212
Afternoon	Oral Presentations MUST N212 澳門科技大學 N 座 212	Oral Presentations MUST N212 澳門科技大學 N 座 212	Oral Presentations MUST N212 澳門科技大學 N 座 212
Evening	Poster Session 17:40-19:00 Venue: 1 <sup>st</sup> Floor, Block N 澳門科技大學 N 座 1 樓 圖書館外	Dinner	Departure

2025.01.08 Afternoon Venue: MUST N212 地點：澳門科技大學 N 座 212 Chair: Pengfei Chen			
14:00-14:25	Louchuang Lee	Institute of Earth Sciences, Academia Sinica	The Ubiquitous Granular Dynamo as the Cause of Solar Wind
14:25-14:50	Jörg Büchner	Center for Astronomy and Astrophysics Berlin Institute of Technology	Kinetic Physics of Solar Wind Turbulence and Reconnection
14:50-15:15	Fang Shen	National Space Science Center, Chinese Academy of Sciences	3D Magnetohydrodynamic (MHD) Modeling of Solar Wind Near Mars: Comparison with Maven and Tianwen-1
15:15-15:30	Xiaozhou Zhao	Yunnan Observatories, Chinese Academy of Sciences	CMEs and Interplanetary Shocks: 2.5D Numerical Simulations

15:30-15:45	Wei Su	Sun Yat-sen University	A New Scenario in Heliophysics: The Impact of Solar-Terrestrial Plasma and Magnetic Fields on Space-Borne Gravitational Wave Detection
Coffee break 15:45-16:05			
Chair: Fang Shen			
16:05-16:30	Pengfei Chen	School of Astronomy and Space Science, Nanjing University	Formation of Chromospheric Moreton Waves Near the Solar Limb
16:30-16:55	Qiang Hu	The University of Alabama in Huntsville, USA	Magnetic Flux Ropes in Space Plasmas.
16:55-17:10	Tao Cai	Macau University of Science and Technology	Convectively Coupled, Equatorially Trapped Waves in the Sun
17:10-17:25	Hsinchen Yu	Macau University of Science and Technology	Effects of Gas Physisorption on Prolate Ellipsoid Dust in Free-Molecule Flows: A Static Analysis
17:25-17:40	Yu Sun	Wuhan University	Impact of Interplanetary Magnetic Field on Subauroral Polarization Streams At Dawn and Dusk

<p>Poster Session 17:40-19:00 Venue: 1<sup>st</sup> Floor, Block N 地點: 澳門科技大學 N 座 1 樓圖書館外 Providing snacks 17:40-18:10</p>
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2025.01.09 Morning Venue: N212 地點: 澳門科技大學 N 座 212 Chair: Linghua Wang			
9:00-10:00	Yoshifumi Saito (Keynote Speech)	Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency	Bepicolombo/Mio Results, Status and Future Plan
10:00-10:25	Hui Tian	Peking University	Mapping the Magnetic Field in the Global Corona Through Observations of Transverse Waves
Coffee break 10:25-10:45			
Chair: Hui Tian			
10:45-11:10	Linghua Wang	Peking University	The In Situ Shock Acceleration of Suprathermal Electrons At 1 Au
11:10-11:35	Kaijun Liu	Southern University of Science and Technology	The Shape of the Heliosphere Derived from the Ibx Ena Observation
11:35-11:50	Mengxuan Ma	National Space Science Center, CAS	Interplanetary Rotation of 2021 December 4 Coronal Mass Ejection on Its Journey to Mars
11:50-12:05	Ming Wang	Nanjing University of Information Science and Technology	Simultaneous Two-Point Study of the Martian Bow Shock Affected by Interplanetary Coronal Mass Ejections: Tianwen-1 and Maven Observations

<p>12:05-14:00 Lunch  Venue: 1<sup>st</sup> floor, Block O  地點: O 座一樓廚藝天地</p>
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<p>2025.01.09 Afternoon  Venue: N212  地點: 澳門科技大學 N 座 212  Chair: Yoshiharu Omura</p>			
14:00-14:25	Dmitrij Titov	Sun Yat-sen University	Atmospheric Circulation from the Venus Express Observations
14:25-14:50	Chao Yue	Peking University	A Statistical Analysis of the Returning Flux Tubes in the Jovian Magnetosphere Based on Juno Observations
14:50-15:05	Sanchuan Xia	Macau University of Science and Technology	Predicting Stellar Mass, Metallicity, and Age with Mixture Density Networks: A Machine Learning Perspective
15:05-15:20	Xing Wang	Macau University of Science and Technology	Coupling Between Acoustic-gravity Waves and the Martian Ionosphere
<p>Coffee break  15:20-15:40</p>			
<p>Chair: Chao Yue</p>			
15:40-16:05	Yoshiharu Omura	Research Institute for Sustainable Humanosphere, Kyoto University	Acceleration of Energetic Protons by Electromagnetic Ion Cyclotron Waves in the Inner Jovian Magnetosphere
16:05-16:30	Paul Hartogh	Max Planck Institute for Solar System Research	Investigating the Jupiter System with a Submillimeter Wave Instrument

16:30-16:45	Jiuwen Sun	Institute of Space Physics and Applied Technology, Peking University	An Improved Jovian Current Sheet Configuration Model for Quiet Conditions
16:45-17:00	Ruotan Li	School of Earth and Space Sciences, Peking University	Observations of Kelvin-Helmholtz Waves on Mercury's Pre-Dawnside Magnetopause: MESSENGER Case Study
17:00-17:15	Meiyun Lin	UCAR / UC Berkeley	Exploring the Sources and Dynamics of Metallic Ions in Earth's Magnetosphere: Lunar Pickup Ions vs. Ionospheric Outflow

2025.01.09/18:30

Dinner: Royal Palace at Lisboeta Macau

晚宴：葡京人皇宮海鮮舫

17:45 - 18:00 Shuttle buses will leave from N block of MUST

下午 17:45-18:00 有三輛穿梭巴士由澳門科技大學 N 座門口發往葡京人皇宮海鮮舫，坐滿就走



2025.01.10 Morning Venue: N212 地點: 澳門科技大學 N 座 212 Chair: Andrew Yau			
9:00-10:00	Xinlin Li (Keynote Speech)	LASP and Department of Aerospace Engineering Sciences, University of Colorado Boulder	The Ongoing Journey of REPTiles: Impactful Science Achieved and Yet to Come
10:00-10:25	Hong Zou	School of Earth and Space Science, Peking University	Review and Prospect of Space Particle Detection Instrument Development at Peking University
Coffee break 10:25-10:45			
Chair: Hong Zou			
10:45-11:10	Andrew Yau	University of Calgary, Canada	Enhanced Polar Outflow Probe (e- POP) / Swarm Echo: A Solar Cycle Later
11:10-11:35	Yasong Ge	Institute of Geology and Geophysics, Chinese Academy of Sciences	Ground Magnetic Survey on Mars from the Zhurong Rover
11:35-12:00	Lutz Richter	Terra Nova Industries, Karlsfeld, Germany	The Terrain Testing Instrument (TTI) As A Selected Payload for the Chang'E 8 Lunar Landing Mission
12:00-12:15	Jiachen Sun	Institute of Space Physics and Applied Technology, Peking University	On-Orbit Cross Calibration of Energetic Electron Flux Measurements from Three Chinese MEO Navigation Satellites and GPS ns70, ns71
12:15-12:30	Yixin Sun	Peking University	MeV Electrons Inside L=2 Observed by MSS1 At LEO During the Mother's Day Storm of May 2025
12:30-14:00 Lunch Venue: 1 <sup>st</sup> floor, Block O 地點: O 座一樓廚藝天地			

2025.01.10 Afternoon Venue: N212 地點: 澳門科技大學 N 座 212 Chair: Li Li			
14:00-14:25	Qinghe Zhang	National Space Science Center, CAS, China	Unusual Shrinkage and Reshaping of Earth's Magnetosphere Under a Strong Northward Interplanetary Magnetic Field
14:25-14:50	Xin Tao	University of Science and Technology of China	Sayram: A Positivity-Preserving Open Source 3D Radiation Belt Modeling Code
14:50-15:05	Chao Xiong	Department of Space Physics, Wuhan University	How Do the Inter-hemispheric Field-Aligned Current Connect with Sq Current in the Ionosphere?
Coffee break 15:05-15:25			
Chair: Xin Tao			
15:25-15:40	Hao Xia	Wuhan University	Effects of Subauroral Polarization Streams on Ionospheric Radial Currents During Quiet Periods
15:40-15:55	Li Li	China University of Geosciences (Beijing)	Nonlinear Drift-Bounce Resonance Between Charged Particles and Ultralow Frequency Waves
15:55-16:10	Xingran Chen	Macau University of Science and Technology	Towards A Better Understanding of Storm Sudden Commencement: Insights from Multi-Source Data Integration
16:10-16:25	Chengzhi Wang	Wuhan University	Spatial Distribution and Wave Property of Dual-Frequency Emic Waves

### Program B (Planetary Science)

Time & Venue:

	Jan. 8 Wednesday	Jan. 9 Thursday	Jan. 10 Friday
Morning	Opening Ceremony Keynote Speech MUST N101 澳門科技大學 N 座 101	Keynote Speech Oral Presentations MUST N214 澳門科技大學 N 座 214	Keynote Speech Oral Presentations MUST N214 澳門科技大學 N 座 214
Afternoon	Oral Presentations MUST N214 澳門科技大學 N 座 214	Oral Presentations Keynote Speech MUST N214 澳門科技大學 N 座 214	Oral Presentations MUST N212 澳門科技大學 N 座 214
Evening	Poster Session 17:40-19:00 Venue: 1 <sup>st</sup> Floor, Block N 澳門科技大學 N 座 1 樓圖書館外	Dinner	Departure

2025.01.08 Afternoon Venue: MUST N214 地點: 澳門科技大學 N 座 214 Chair: Bernard Foing			
14:00-14:25	Hai Liu	Guangzhou University	In-Situ Tests on Internal Friction Angle of Lunar Soils at the Ce-5/6 Landing Sites
14:25-14:50	Zhiguo Meng	Jilin University	New Findings of the Moon Revealed by Chang'e-1/2 Microwave Radiometer Data
14:50-15:05	Ling Zhang	Sun Yat-sen University	A Flat-Bottomed Buried Crater and Paleo-Layered Structures Revealed at the Von Kármán Crater Using Lunar Penetrating Radar
15:05-15:20	Manhei Ng	Macau University of Science and Technology	Chang'E-2 X-Ray Observations of the Sun: Evolution of Elemental Abundances During Solar Flares

Coffee break 15:20-15:40			
Chair: Long Xiao			
15:40-16:05	Benjamin Chao	Inst. Earth Sciences, Academia Sinica, Taiwan	Planetary Surface Mass Density Determined from Gravity and Topography
16:05-16:20	Qingyun Deng	Sun Yat-sen University	Current Status and Prospects of Investigating Lunar Lava Tube Using GRAIL Gravity Data
16:20-16:45	Chunyu Ding	Shenzhen University	Radar Observation of the Lava Tubes on the Moon and Mars
16:45-17:10	Takao Kobayashi	The Korea Institute of Geoscience and Mineral Resources (KIGAM)	Bragg Resonance Interference in Kaguya Lunar Radar Sounder Data Processing
17:10-17:25	Changyu Zhou	Tongji University	Application of Persistent Homology for Time-Frequency Characterization of Lava Tube Echoes
17:25-17:40	Honkuan Wong	Macau University of Science and Technology	Permittivity Estimation for Detection of Lava Tubes

<p>Poster Session 17:40-19:00 Venue: 1<sup>st</sup> Floor, Block N 地點：澳門科技大學 N 座 1 樓圖書館外 Providing snacks 17:40-18:10</p>
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<p>2025.01.09 Morning  Venue: MUST N214  地點：澳門科技大學 N 座 214  Chair: Ziliang Jin</p>			
9:00-10:00	Yuri Amelin (Keynote Speech)	Guangzhou Institute of Geochemistry, Chinese Academy of Sciences	Origin of the Solar System as Seen by A Geochemist
10:00-10:25	Bernard Foing	LUNEX EMMESI, Leiden University and COSPAR	Highlights from EuroMoonMars Earth Space Innovation: Data Analysis, Instruments, Space Missions, Astronautics, Research and Business Innovation
<p>Coffee break  10:25-10:45</p>			
<p>Chair: Yuri Amelin</p>			
10:45-11:10	Le Zhang	Guangzhou Institute of Geochemistry, Chinese Academy of Sciences	The Chang'E-6 Lunar Samples Reveal A 2.83- Billion-Year-Old Basalt with Depleted Mantle Source from Moon's Far Side
11:10-11:35	Liping Qin	University of Science and Technology of China	Using Isotopic Anomalies to Trace the Formation of Planetary Reservoirs
11:35-11:50	Yuqi Qian	The University of Hong Kong	What Left to Know of Lunar Volcanism
11:50-12:05	Rui Chen	Macau University of Science and Technology	The Designed Measurement Accuracy and Calibration of the Chang'E-7 Lunar Soil Water Molecule Analyzer (LSWMA)

<p>12:05-14:00 Lunch  Venue: 1<sup>st</sup> floor, Block O  地點：O 座一樓廚藝天地</p>
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<p>2025.01.09 Afternoon  Venue: MUST N214  地點：澳門科技大學 N 座 214  Chair: Mohamed Ramy EL-Maarry</p>			
14:00-14:25	Yang Liu	National Space Science Center, CAS	Comprehensive Analysis of the Alteration of Tyrrhena Terra: Implications for Source-to-Sink Processes on Mars
14:25-14:50	Jun Huang	China University of Geosciences (Wuhan)	Pitted Cones on Mars: Insights into Ancient Oceans, Subsurface Processes, And Potential Habitability
14:50-15:05	Sheng Gou	Macau University of Science and Technology	Paleoenvironment Implications of Layered Ejecta Craters in the Martian Northern Planitia
15:05-15:20	Ting Huang	Macau University of Science and Technology	Biosignatures in Terrestrial Sulfate: Implications for Mars Sample Return Mission
<p>Coffee break  15:20-15:40</p>			
<p>Chair: Roberto Bugiolacchi</p>			
15:40-16:40	Christian Wöhler (Keynote Speech)	TU Dortmund University, Germany	Spectral Detection of Lunar Surficial Hydroxyl/Water and the Relevance of Thermal Modelling
16:40-16:55	Yunzhao Wu	Purple Mountain Observatory, Chinese Academy of Sciences	High-resolution Spectroscopy of Airless Bodies: Remote Sensing, In situ and Laboratory Measurements
16:55-17:10	Kai Li	Institute of Mechanics, Chinese Academy of Sciences	Progress in Microgravity Fluid Physics and Thermophysics Research

17:10-17:25	Marta Filipa Simoes	Macau University of Science and Technology	Fungal Exposure to Simulated Microgravity and Hypergravity – Relevance for Space Exploration
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2025.01.09/18:30  
Dinner: Royal Palace at Lisboeta Macau  
晚宴：葡京人皇宮海鮮舫  
17:45 – 18:00 Shuttle buses will leave from N block of MUST  
下午 17:45-18:00 有三輛穿梭巴士由澳門科技大學 N 座門口發往葡京人皇宮海鮮舫，坐滿就走

2025.01.10 Morning Venue: MUST N214 地點：澳門科技大學 N 座 214 Chair: Jianghui Ji			
9:00-10:00	Alberto Cellino (Keynote Speech)	INAF-OAT, Italy	Gaia Photometry of Solar System Objects: the Lesson Learnt From the Third Gaia Data Release (Gdr3), and Plans for GDR4
10:00-10:15	Zhenya Zheng	Shanghai Astronomical Observatory, CAS	Development Progress and Scientific Examples/Preparations of CSST-MCI
10:15-10:40	Ariel Graykowski	SETI Institute, USA	The Prevalence of the Unistellar Network in the Growing Field of Citizen Astronomy
10:40-10:55	Yezhi Song	Shanghai Astronomical Observatory, CAS	Multi-Source Information Fusion for Orbit Determination of Space Debris
Coffee break 10:55-11:15			
Chair: Zhiyong Xiao			
11:15-11:30	Roberto Bugiolacchi	Macau University of Science and Technology	Six Craters on the Lunar Nearside: Are They Related? Implications for Earth's History
11:30-11:45	Jialong Lai	JiangXi University of Science and Technology	Research on Lunar Regolith of the Chang'e-4 Landing Site: An Automated Analysis Method Based on Deep Learning Framework
11:45-12:00	Luyuan Xu	Macau University of Science and Technology	Provenance of the Chang'E-6 Samples: Insights from Chronology, Foreign Ejecta, and Impact Gardening



12:00-12:15	Yichen Wang	Sun Yat-sen University	Proximal Ejecta Thickness of Lunar Simple Craters Constrained by Numerical Simulations
12:15-14:00 Lunch Venue: 1 <sup>st</sup> floor, Block O 地點: O座一樓廚藝天地			

2025.01.10 Afternoon Venue: N214 地點: 澳門科技大學 N 座 214 Chair: Manto Hui			
14:00-14:25	Mohamed Ramy El-Maarry	Khalifa University, Abu Dhabi, UAE	Small Bodies with Big Answers: A Look into the Future of the Solar System's Small Bodies Exploration
14:25-14:50	Yuri Skorov	Max Planck Institute for Solar System Research, Germany	Comet Activity: Modeling and Analysis from Micro to Macro
14:50-15:15	Toshihiro Kasuga	National Astronomical Observatory of Japan	Two Mission Targets: Near-Earth Asteroid (3200) Phaethon and Jupiter Family Comet 289P/Blanpain
15:15-15:40	Shun Dai	National Astronomical Observatories, Chinese Academy of Sciences	Scientific Verification Tests of the Asteroid Core Scan Radar (ACSR) Onboard Tianwen-2 Mission
15:40-15:55	Minge Liu	National Space Science Center, Chinese Academy of Sciences	Discussions on the Spectral Type and Possible Origins of Near-Earth Asteroid (469219) 2016 HO3 Kamo'oalewa
Coffee break 15:55-16:15			
Chair: Xiaoping Zhang			
16:15-16:30	Shuoran Yu	Peking University & Free University of Berlin	Radius of Lunar Regolith Grains Revealed by Thermal-Infrared Observations of Lunar Reconnaissance Or-Biter (LRO) Diviner Radiometer

16:30-16:45	Xingyang She	China university of Geosciences (Wuhan)	Research of the Rheological and Thermodynamic Properties of Lunar Sinuous Rilles
16:45-17:00	Mingwen Zhu	Macau University of Science and Technology	A Heat Transfer-Based Approach for Constructing Spatio-Temporal Continuous Distribution of Lunar Microwave Emission
17:00-17:15	Hao Wang	University of Hawai'i at Mānoa, Honolulu, USA	Studying Lunar Surface Via Simulation and Analogs

## Poster Presentations: Jan.8 Afternoon-Jan.10 Afternoon

Venue: Macau University of Science and Technology, 1<sup>st</sup> Floor, Block N

地點：澳門科技大學 N 座 1 樓（圖書館外）

\*All posters should be removed before 17:00 on Jan. 10

No.	Name	Affiliation	Title
P01	Run Shi	Tongji University	A Parametric Study of Quasi-Static Electron Acceleration by Modified Electron Acoustic Wave
P02	Shijian Chun	Shanghai Astronomical Observatory, CAS	Activity Analysis on 68P/Klemola and 78P/Gehrels 2 in 2018–2020 Perihelion Passage
P03	Jiali Chen	Institute of Space Physics and Applied Technology, Peking University	Data Imputation for FY-3E MEED and Short-Term Prediction of Energetic Electron Flux in LEO
P04	Yutong Zhang	University of Chinese Academy of Sciences	Progress in the Study of Typical Planetary Landforms Over the Past 30 Years: A Bibliometric Analysis in Citespace
P05	Desheng Han	Tongji University	Observational Properties and the Implications of Throat Aurora and 15MLT-PCA
P06	Chao Yuan	Macau University of Science and Technology	Asteroid Shape Inversion from Radar Data Based on Deep Learning
P07	Pengyue Wang	Macau University of Science and Technology	Grain Size Effects on Spectral Alteration and Mineralogy of II Chondrites
P08	Yu Lou	Peking University	Effects of Martian Dust Storms on Ionospheric Peak Altitudes
P09	Yunfang Zhong	Wuhan University	Responses of Ionospheric F Layer Radial Current to Substorms During Sawtooth Events
P10	Aili Zhu	Macau University of Science and Technology	Characterization Of Endolithic Microbial Communities in Hyperarid Environments of the United Arab Emirates
P11	Qihang Cheng	Department of Space Physics, School of Electronic Information, Wuhan University	Local Time and Hemispheric Asymmetries of Field-Aligned Currents and Polar Electrojet During May 2025 Superstorm Periods
P12	Jiutong Zhao	UC Berkeley SSL	Statistics of the Interplanetary

			Magnetic Field From 0.1 to 30 AU: Distribution Character
P13	Qitao Hu	Macau University of Science and Technology	Ancient Protein Preservation Within Sabkha of Mars Analogue Sites in the United Arab Emirates
P14	Siqi Yi	Macau University of Science and Technology	Time-dependent MHD Simulation of the Lunar Core's Response to the Sudden Change in the Interplanetary Magnetic Field
P15	Wenjing Zhao	Macau University of Science and Technology	Statistical Study on the Relative Position of the Induced Magnetopause and Ionopause at Venus
P16	Zhipeng Liu	Macau University of Science and Technology	Provenance of Ejecta and Regolith Thickness in the Vicinity of the Chang'e-6 Landing Site