

ICAST

**INTERNATIONAL CONFERENCE ON
APPLICATIONS OF SPACE SCIENCE & TECHNOLOGY**
Pakistan Space & Upper Atmosphere Research Commission
Institute of Space Technology, Islamabad, Pakistan
November 18-20, 2025

A central graphic featuring a blue wireframe globe of the Earth. Several satellite icons are positioned around the globe, with lines suggesting orbital paths. The globe is set against a background of concentric circles. A large blue banner with white text is overlaid across the middle of the globe.

CONFERENCE PROGRAM

CONFERENCE SECRETARIAT

National Center of GIS & Space Applications
Institute of Space Technology, Islamabad, Pakistan

TENTATIVE PROGRAM OVERVIEW

Program Day 1: Tuesday, November 18, 2025 (Leadership Focused)

Time (PKT) Hours	0900 - 1000	1000-1100	1100-1130	1130-1315	1315-1415	1415-1600	1930-2130	
Auditorium, Raza Block	Registration Confirmation & Reception	Inaugural Ceremony	Networking Break Eatery Back Lawn	Strategic Leadership Summit (Space for All)	Lunch & Prayer Break Eatery Side Lawn	Plenary Session Global Partnerships for a Shared Space Future: Cooperation, Connectivity, and Strategic Vision	ICAST 2025 Gala Dinner (By Invitation Only)	
Video Conference Room, Raza Block				Seminar Space Technologies for National Security & Strategic Applications		Technology Exhibition Forum: Commercial Solutions for the Space Era		
Class Room 206, Raza Block						Panel Discussion Precision, Positioning, and Beyond: Emerging Trends in GNSS Technology		
Class Room 207, Raza Block				Technical Session (Astronomy & Astrophysics)				
Class Room 6201, Farooque Block						Technical Session (Aeronautics & Astronautics)		
Class Room 6202, Farooque Block				Technical Session (Positioning, Navigation & Timing)				
Class Room 6203, Farooque Block				Technical Session (Remote Sensing & Geographic Information Science)		Technical Session (Environmental Science & Climate Change)		
Class Room 6204, Farooque Block				Technical Session (Information & Communication Technologies)				
Class Room 6228, Farooque Block				Master Class Physiology in Orbit: The Science of Life in Space		Master Class Satellite Radar Altimetry: Development and Exploitation Over Ocean and Inland Waters		
Class Room 6229, Farooque Block				Master Class Space Law in Action: A Simulation on Policy & Legal Frameworks for Emerging Space Nations		Master Class Designing Complex Space Missions: Principles of Space Systems Engineering		
Exposition Arena, Raza Block				Exposition				Exposition

TENTATIVE PROGRAM OVERVIEW

Program Day 2: Wednesday, November 19, 2025 (Research Focused)

Time (PKT) Hours	0830 - 0930	0930 - 1100	1100-1130	1130-1315	1315-1415	1415-1600	1930-2130
Auditorium, Raza Block	Registration Confirmation & Reception	Plenary Session Geospatial Intelligence for Climate Resilience – Celebrating GIS Day 2025	Networking Break Eatery Back Lawn	Plenary Session The Future of Earth Observation: From Satellites to Smart Decision-Making	Lunch & Prayer Break Eatery Side Lawn	Plenary Session Enabling the Future: Smart, Small, and Sustainable Space Systems	Heritage Tour & Dinner (By Invitation Only)
Video Conference Room, Raza Block		Master Class Reaching Diverse Audiences in Space and Astronomy Education and Outreach		Master Class Becoming an Astronaut: Training, Challenges, and the Road to Space		Seminar National Geospatial Infrastructure: Building Pakistan's Digital Future	
Class Room 206, Raza Block				Panel Discussion Empowering the Next Generation through Space Education and Public Engagement			
Class Room 207, Raza Block		Technical Session (Astronomy & Astrophysics)				Technical Session (Space Law, Management & Outreach)	
Class Room 6201, Farooque Block				Technical Session (Aeronautics & Astronautics)		Technical Session (Aeronautics & Astronautics)	
Class Room 6202, Farooque Block				Technical Session (Positioning, Navigation & Timing)		Technical Session (Satellite Technology)	
Class Room 6203, Farooque Block				Technical Session (Environmental Science & Climate Change)		Technical Session (Remote Sensing & Geographic Information Science)	
Class Room 6204, Farooque Block				Technical Session (Information & Communication Technologies)		Technical Session (Information & Communication Technologies)	
Class Room 6228, Farooque Block		Master Class Satellite System Engineering and A CubeSat Design		Master Class Indigenous and Trusted IC Design for Space Science and Technology		Master Class Climate Change Impacts and Response with Fengyun Satellites	
Class Room 6229, Farooque Block		Master Class Moon Sighting-Scientific, Religious and Technological Perspectives				Master Class Recent Trends in Artificial Intelligence for Earth Observation	
Poster Exhibition Arena, Raza Block						Scientific Poster Session: Emerging Research and Applications	
Exposition Arena, Raza Block				Exposition			

TENTATIVE PROGRAM OVERVIEW

Program Day 3: Thursday, November 20, 2025 (Capacity Building Focused)

Time (PKT) Hours	0830-0930	0930 - 1100	1100-1130	1130-1315	1315-1415	1430 - 1530	1530 - 1600	1930-2130
Auditorium, Raza Block	Registration Confirmation & Reception	Meet the Astronauts Forum	Networking Break Eatery Back Lawn	Plenary Session Space for Humanity: Integrating Science, Technology, Law, and Education	Lunch & Prayer Break Eatery Side Lawn	Closing Ceremony	Farewell Tea Eatery Back Lawn	City Tour, and Farewell Dinner (By Invitation Only)
Video Conference Room, Raza Block		Technology Exhibition Forum: Commercial Solutions for the Space Era		Seminar Innovating the Future: Transformative Technologies in the Space				
Class Room 206, Raza Block				Panel Discussion Earth Observation and Remote Sensing: Transforming Data into Action				
Class Room 207, Raza Block		Technical Session (Space Law, Management & Outreach)						
Class Room 6201, Farooque Block		Technical Session (Astronomy & Astrophysics)		Technical Session (Aeronautics & Astronautics)				
Class Room 6202, Farooque Block				Technical Session (Satellite Technology)				
Class Room 6203, Farooque Block				Technical Session (Remote Sensing & Geographic Information Science)				
Class Room 6204, Farooque Block				Technical Session (Information & Communication Technologies)				
Class Room 6228, Farooque Block				Master Class Strengths, Challenges, and Implications of Remote Sensing: Application for Mineral Mapping				
Class Room 6229, Farooque Block				Master Class Extracting TEC from GNSS Data: Techniques for Space Weather and Ionospheric Analysis				
Exposition Arena, Raza Block	Exposition	Exposition						



DETAILED

TECHNICAL PROGRAM

Day 1, Tuesday, November 18, 2025

Time (PKT) Hours	Program	Venue	
0830 - 0945	Registration Confirmation & Reception	IST Gate 1 & Raza Block	
1000 - 1100	Inaugural Ceremony	Auditorium, Raza Block	
	Master of Ceremony: Ms. Masuma Fatima, Space & Upper Atmosphere Research Commission, Pakistan		
	Title of Presentation	Speaker	Designation & Affiliation
1000 - 1007	Recitation from the Holy Qur'an, National Anthem, Welcome Remarks by the Master of Ceremony		
1007 - 1010	Welcome Address	Dr. Syed Najeeb Ahmad	Vice Chancellor, Institute of Space Technology, Pakistan
1010 - 1015	Opening Remarks	Mr. Muhammad Yousuf Khan	Chairman, Pakistan Space and Upper Atmosphere Research Commission, Pakistan
1015 - 1030	Special Remarks	Mr. Nadeem Mahbub	Acting Chairperson, Higher Education Commission, Pakistan
		Ms. Jiang Hui	Secretary General, Asia-Pacific Space Cooperation Organization (APSCO), China
		Dr. Salim M. AlMalik	Director General, Islamic World Educational, Scientific and Cultural Organization (ICESCO), Morocco
		Ms. Aarti Holla-Main	United Nations Office for Outer Space Affairs (UNOOSA), Austria
1030 - 1045	Inaugural Address	Chief Guest	
1045 - 1100	Souvenir Presentation & Meet the Astronauts		
1100 - 1130	Group Photograph, Exhibition Visit & Networking Break	Eatery - Side Lawn	
1130-1315	Strategic Leadership Summit Space for All		Auditorium, Raza Block
	Moderator: Ms. Sabahat Bilal, Space & Upper Atmosphere Research Commission, Pakistan		

	Title of Presentation	Speaker	Designation & Affiliation
1130 - 1140	Recitation from the Holy Qur'an, National Anthem, Welcome Remarks by the Master of Ceremony		
1140 - 1145	Welcome Address	Muhammad Yousuf Khan	President, Inter Islamic Network on Space Sciences & Technology, Pakistan
1145 - 1150	Opening Remarks	Aarti Holla-Main	United Nations Office for Outer Space Affairs (UNOOSA), Austria
1150 - 1210	Keynote Speeches	Prof. Dr. M. Iqbal Choudhary	The Coordinator General, Standing Committee on Scientific and Technological Cooperation (COMSTECH), Pakistan
		Dr. Jiang Hui	Secretary General, Asia-Pacific Space Cooperation Organization (APSCO), China
		Dr. Salim M. AlMalik	Director General, Islamic World Educational, Scientific and Cultural Organization (ICESCO), Morocco
		Mr. Yusuf Kıraç	President, Turkish Space Agency (TUA), Türkiye
		Mr. Amanat Umbetbayev	Managing Director, Kazakhstan Gharysh Sapary
1210 - 1215	Keynote Speeches on Moon Sighting	Mohammad Shawkat Odeh	Director of International Astronomical Center, United Arab Emirates
1215 - 1220		Prof. Dr. Osama M. Shalabiea	Professor of Astrophysics and Space physics Cairo University, Egypt
1220 - 1240	Strategic Leadership Dialogue Global Commitment to Access to Space for All		Auditorium, Raza Block
	Moderator: Dr. Muhammad Yasir, Pakistan Space and Upper Atmosphere Research Commission, Pakistan		
	Panelists	Organization	
	Colonel Haythem Ismail	Technical Director, The National Center of Cartography and Remote Sensing (CNCT), Tunisia	
	Mr. Jafar Shahsavari	Director General, Center for International Relations & Cooperation, Iranian Space Agency, Iran	
	Mr. Khandaker Yasir Arefin	Bangladesh Space Research and Remote Sensing Organization, Bangladesh	
	Ousmane BATHIERY	Ecological Monitoring Centre, Senegal	
1245 - 1315	Closing Remarks, Adoption of Joint Statement and Meet the Leaders		

1130 - 1315		Seminar Space Technologies for National Security & Strategic Applications		Video Conference Room, Raza Block	
		Chair: Dr. Muhammad Salman Ashraf, Earth Sciences, New Zealand Moderator: Dr. Abdul Waheed, Associate Professor, Aeronautics & Astronautics, Institute of Space Technology, Islamabad			
		Title of Presentation	Speaker	Organization	
1130 - 1155		Space-Based Communications, Navigation and Resilience in Defence Systems	Dr. Ali Sarosh	Air University, Pakistan	
1155 - 1220		Emerging Trends in Materials for Rocket Combustion Chambers	Dr. Wilayat Husain	Institute of Space Technology, Pakistan	
1220 - 1245		Anti-Satellite and Counterspace Capabilities: Strategic Implications	Raza Haider	Centre for Aerospace & Security Studies (CASS), Pakistan	
1245 - 1310		Space as a Contested Domain: Implications for National Security	Dr. Ahmad Khan	Arms Control and Disarmament Affairs, Pakistan	
1130 - 1315		Technical Session Astronomy & Astrophysics		Class Room 207, Raza Block	
		Chair: Dr. Mike Simmons, University of California, United States of America Co-Chair: Prof. Dr. Jawed Iqbal, Institute of Space Science and Technology, University of Karachi Moderator: Ms. Maham Siddiquie, Lecturer, Space Science, Institute of Space Technology			
		Paper ID	Title of Presentation	Speaker	Organization
1130 - 1155		Keynote	Standard Cosmological Model of Universe and Energy Model in Bianchi Type-V Space-time via RIF Integration Techniques	Prof. Dr. M. Jawed Iqbal	Institute of Space Science and Technology, University of Karachi, Pakistan
1155 - 1215		ICAST25-21-13	Fast Radio Bursts: Mechanisms of Radiation and Propagation in Magnetar with Finite Temperature Electron-Positron Plasma	Umer Rehman	Nanjing University, China
1215 - 1235		ICAST25-199-305	Nuclear Ground-State Properties Of 67-80As Isotopes Using Relativistic Mean Field Calculations	Izzah Anwaar	Institute of Space Technology, Pakistan
1235 - 1255		ICAST25-164-172	Asteroseismology: AI-Driven Seismic Event Detection for Extra-Terrestrial Missions	Muhammad Zain Ali	Quaid-i-Azam University, Pakistan
1255 - 1315		ICAST25-63-90	Tracing the Origin of Heavy Elements in the Highly r-Process Enhanced Star 2MASS J22132050-5137385 ([Eu/Fe] = +2.45)	Muhammad Ashraf	Hebei Normal University, China

1130 - 1315	Technical Session Positioning, Navigation and Timing			Class Room 6202, Farooque Block
	Chair: Dr. Anton Kashcheyev, University of New Brunswick, Fredericton, Canada Co-Chair & Moderator: Dr. Munawar Shah, Dept. of Space Science, Institute of Space Technology, Pakistan			
	Paper ID	Title of Presentation	Speaker	
1130 - 1155	ICAST25-207-330	Ionospheric Modeling Over Pakistan: From Conventional Methods to AI-Based Techniques	Muhammad Ameen	Pakistan Space and Upper Atmosphere Research Commission, Pakistan
1155 - 1215	ICAST25-174-182	Study of Equinoctial Asymmetry in TEC for the Two Extremes of Solar Cycle 24	Fatima Ather	University of Karachi, Pakistan
1215 - 1235	ICAST25-121-112	Stormy Skies: Analyzing M-I-T Coupling Effects During the May 2024 Event over America	Syed Faizan Haider	National Center of GIS & Space Applications, Pakistan
1235 - 1255	ICAST25-52-128	Geomagnetic Storm Effects on the Ionosphere: Insights from TEC, EEJ, and O/N2 Ratio Analysis	Affan Ahmed	Institute of Space Technology, Pakistan
1130 - 1315	Technical Session Remote Sensing & Geographic Information Science			Class Room 6203, Farooque Block
	Chair: Prof. Dr. Mark van der Meijde, University of Twente, The Netherlands Co-Chair & Moderator: Dr. Muhammad Shafique, National Center of Excellence in Geology, University of Peshawar			
	Paper ID	Title of Presentation	Speaker	
1130 - 1155	Keynote	GNSS Ionospheric Precursors Identification of Earthquakes and Solar Storms	Dr. Munawar Shah	Institute of Space Technology, Pakistan
1155 - 1215	ICAST25-46-23	Application of HEC-HMS for Flood Forecasting and Flood Mapping of Soan River Basin Pakistan	Abdul Hanan Hamid	Institute of Space Technology, Pakistan
1215 - 1235	ICAST25-58-35	Role of GIS in Human Healthcare Planning to Mitigate Poliovirus, Malaria, and COVID-19 Diseases	Muhammad Amjad	National Center of GIS & Space Application, Pakistan
1235 - 1255	ICAST25-93-60	Forecasting of Groundwater Level Using Geospatial Techniques and Machine Learning Models	Syed Aamir Mehmood Shah	Punjab Municipal Development Fund Company, Pakistan
1130 - 1315	Technical Session Information & Communication Technologies			Class Room 6204, Farooque Block
	Chair: Dr. Adnan Ahmad Khan, Pakistan Space and Upper Atmosphere Research Commission, Pakistan Co-Chair & Moderator: Dr. Amena Ejaz Aziz, Dept. of Electrical Engineering, Institute of Space Technology, Islamabad			

	Paper ID	Title of Presentation	Speaker	Organization
1130 - 1155	Keynote	6G for Non Terrestrial Networks	Dr. Adnan Ahmad Khan	Pakistan Space and Upper Atmosphere Research Commission, Pakistan
1155 - 1215	ICAST25-58-29	Design of Antenna-Multiplexer for Seamless Body Network using Internet of Medical Things (IoMT) Connectivity	Fazila	National Center of GIS & Space Applications, Pakistan
1215 - 1235	ICAST25-113-108	Modeling Maximum Usable Frequency (MUF) for Sky Wave Communication	Hira Siddique	University of Karachi, Pakistan
1235 - 1255	ICAST25-169-169	Distance Based Spectrum Allocation Scheme for D2D Communication	Muhammad Fawad Rasheed	Sir Syed CASE Institute of Technology, Pakistan
1255 - 1315	ICAST25-264-318	Robust and Polarization Independent Chipless RFID Tag for Data-Dense IoT Applications	Anoosha Younas	University of Engineering and Technology, Pakistan
1130 - 1315	Master Class Physiology in Orbit: The Science of Life in Space Dr. Lifang Hu, Northwestern Polytechnical University, China			Class Room 6228, Farooque Block
1130 - 1315	Master Class Space Law in Action: A Simulation on Policy & Legal Frameworks for Emerging Space Nations Mr. Hamza Hameed, Access Partnership, Singapore			Class Room 6229, Farooque Block
1315 - 1415	Luncheon: Networking & Prayer Break			Eatery - Side Lawn
1415 - 1600	Plenary Session Global Partnerships for a Shared Space Future: Cooperation, Connectivity, and Strategic Vision			Auditorium, Raza Block
	Chair: Professor Dr. Abdul Rehamn, Dean, Institute of Space Technology, Pakistan Moderator: Mr. Usama Ahmed, Institute of Space Technology, Pakistan			
			Title of Presentation	Speaker
1415 - 1435		Connecting Continents: Senegal's Perspective on Building Bridges in the Global Space Landscape	Banda Marame Kaire	Senegalese Agency for Space Studies (ASES), Senegal
1435 - 1455		Space Partnership for Human-Centric Development: ICESCO's Vision for a Connected and Empowered Islamic World	Dr. Muhammad Sharif	Islamic World Educational, Scientific and Cultural Organization (ICESCO), Morocco
1455 - 1515		Next Generation Space Missions and a Rising Space Economy: Opportunities and Challenges	Dr. Qamar ul Islam	Institute of Space Technology, Pakistan
1515 - 1535		From Launchpads to Leadership: Kazakhstan's Role in Strengthening Eurasian Space Cooperation	Mr. Amanat Umbetbayev	Kazakhstan Gharrysh Saparay, Kazakhstan

1535 - 1555	The Future of Networks: Direct-to-Device for Universal Meaningful Connectivity	Ms. Carolina Daza Tache	Access Partnership, Singapore
1555 - 1610	Expanding Economies Beyond Earth: Harnessing Space Innovation to Power Global Growth and Prosperity	Shelli Brunswick	SB Global LLC, United States of America
1415 - 1600	Technology Exhibition Forum: Commercial Solutions for the Space Era		Video Conference Room, Raza Block
	Moderator: Ahmer Rafi, Additional Director, Institute of Space Technology, Islamabad		
	Title of Presentation	Speaker	Organization
1415 - 1435	Company Presentation: Paisatellite Information Technology Co. Ltd., China		Paisatellite Information Technology Co. Ltd., China
1435 - 1500	Company Presentation: Glavkosmos, Russia		Glavkosmos, Russia
1500 - 1525	Company Presentation: Beijing Minospace Technology Co., Ltd., China		Beijing Minospace Technology Co., Ltd., China
1525 - 1550	Company Presentation: Chang Guang Satellite Technology Co., Ltd., China		Chang Guang Satellite Technology Co., Ltd., China
1415 - 1600	Panel Discussion Precision, Positioning, and Beyond: Emerging Trends in GNSS Technology		Class Room 206, Raza Block
	Moderator: Dr. Najam Abbas Naqvi, Institute of Space Technology, Islamabad		
	Panelists	Organization	
	Dr. Salma Zainab Farooq	Institute of Space Technology, Pakistan	
	Mr. Syed Fawad Zulfiqar	Pakistan Space and Upper Atmosphere Research Commission, Pakistan	
	Dr. Anton Kashcheyev	University of New Brunswick, Fredericton, Canada	
	Dr. Munawar Shah	Institute of Space Technology, Pakistan	
	Dr. Zeeshan Ali Memon	Dawood University of Engineering & Technology Karachi, Pakistan	

1415 - 1600	Technical Session Aeronautics & Astronautics			Class Room 6201, Farooque Block
	Chair: Dr. Saad Riffat Qureshi, Institute of Space Technology, Pakistan Moderator: Mr. Asad Mehmood, Institute of Space Technology, Pakistan			
	Paper ID	Title of Presentation	Speaker	
1415 - 1440	ICAST25-38-323	Recent Advancements in Hypersonic Glide Vehicles With Implementation Scheme on Aerodynamic Shape Optimization of X-43A	Muhammad Fawad Mazhar	Institute of Space Technology, Pakistan
1440 - 1500	ICAST25-500-500	Design and Optimization of Flanges for stiffened Pressure Vessels	Naseem Ahmad	Institute of Space Technology, Pakistan
1500 - 1520	ICAST25-209-199	Satellite Detumbling Systems – An Insight into Contact Detumbling Using Flexible Device and its Control Design	Amir Khan	Northwestern Polytechnical University, China
1520 - 1540	ICAST25-111-97	Bio Inspired Corrugated Airfoils for MAV's: A Comparative Study to Optimize Lift, Drag, and Stability at Low Reynolds Numbers	Alwaz Ali Syed	National University of Sciences & Technology, Pakistan
1540 - 1600	ICAST25-107-280	Performance Evaluation of Plasma-Enhanced Hybrid Rocket Fuels Using MATLAB-Based Thermochemical Modeling	Laiba Khuram	Institute of Space Technology, Pakistan
1415 - 1600	Technical Session Satellite Technology			Class Room 6202, Farooque Block
	Chair: Professor Dr. Shufan Wu, Professor, Shanghai Jiao Tong University, China Co-Chair: Dr. Aamir Habib, Space & Upper Atmosphere Research Commission, Pakistan Moderator: Ms. Aima Zahid, Institute of Space Technology, Pakistan			
	Paper ID	Title of Presentation	Speaker	
1415 - 1440	Keynote	Artificial Intelligence for Next Generation Satellite Networks	Dr. Aamir Habib	Space & Upper Atmosphere Research Commission, Pakistan
1440 - 1500	ICAST25-193-197	Design and Implementation of a Ka-Band Local Oscillator for Satellite Applications	Khawaja Waleed Zahid	Institute of Space Technology, Pakistan
1500 - 1520	ICAST25-311-252	High Efficient Metasurface Based Polarization Converter For Satellite Applications	Arbab talhah	University of Engineering & Technology Mardan, Pakistan
1520 - 1540	ICAST25-116-131	Survey of the Architecture of Digital Twin and its Applications With CubeSats	Laiba Jamil	Institute of Space Technology, Pakistan

1540 - 1600	ICAST25-193-198	Design and Development of a 2-Stage Ku-Band 25W GaN High Power Amplifier for Satellite Transponders	Humayun Zahid	University of Central Punjab, Pakistan
1415 - 1600	Technical Session Environmental Science & Climate Change			Class Room 6203, Farooque Block
	Chair: Dr. Zia ul Haq, Associate Professor, University of the Punjab University, Pakistan Moderator & Co-Chair: Ms. Syeda Saleha Fatim Ali, National Disaster Management Authority, Islamabad			
	Paper ID	Title of Presentation	Speaker	Organization
1415 - 1440	Keynote	Applications of Geospatial Technologies for Detecting Transboundary Air Pollution (AIR-TRAP) over Pakistan	Dr. Zia ul Haq	University of the Punjab University, Pakistan
1440 - 1500	ICAST25-388-314	Transcriptome Analysis of Deleterious Microbiologically Influenced Corrosion-Related Genes in Bacillus Subtilis in Low Earth Orbit	Mehwish Rehman	National University of Sciences & Technology, Pakistan
1500 - 1520	ICAST25-289-316	Remote Sensing Based Evaluation of Climate Induced Landslide Susceptibility	Laiba Farooq	University of Engineering & Technology Taxila, Pakistan
1520 - 1540	ICAST25-96-63	Estimation of Land Surface Temperature Over Hyderabad, Pakistan, Using Remote Sensing and GIS Application	Sartaj Mahesar	Geological Survey of Pakistan, Pakistan
1415 - 1600	Master Class Satellite Radar Altimetry: Development and Exploitation Over Ocean and Inland Waters Dr. Stefano Vignudelli, National Research Council of Italy (CNR), Italy			Class Room 6228, Farooque Block
1415 - 1600	Master Class Designing Complex Space Missions: Principles of Space Systems Engineering Dr. Alim Rustem Aslan, Professor, Istanbul Technical University, Türkiye			Class Room 6229, Farooque Block
1930 - 2130	ICAST 2025 Gala Dinner			By Invitation Only

DAY 2 | WEDNESDAY | NOVEMBER 19, 2025

Time (PKT) Hours	Program		Venue	
0930 - 1100	Plenary Session Geospatial Intelligence for Climate Resilience – Celebrating GIS Day 2025		Auditorium, Raza Block	
	Moderator: Dr. Sami Ullah, Kohsar University Murree, Pakistan			
		Title of Presentation	Speaker	Organization
0930 - 0950	Does Every Image of the Same Area Give You the Same Answer?	Prof. Dr. Mark van der Meijde	University of Twente, The Netherlands	
0950 - 1010	Integrating Space-Based Observations and Geospatial Intelligence for Climate Monitoring and Early Warning Systems	Ms. Gao Ling	China Meteorological Agency, China	
1010 - 1030	Integrating Satellite Observations With Ground Based Meteorology: Towards a Smart Weather Prediction System In Pakistan	Mahr Sahibzad Khan	Pakistan Meteorological Department, Pakistan	
1030 - 1050	Multi-hazards Vulnerability and Risk Assessment in North Pakistan using Open-Source Remote Sensing data and Geoinformation Techniques	Dr. Muhammad Shafique	National Center of Excellence in Geology, University of Peshawar, Pakistan	
0930 - 1100	Master Class Reaching Diverse Audiences in Space and Astronomy Education and Outreach Dr. Mike Simmons, University of California, Los Angeles (UCLA), USA		Video Conference Room, Raza Block	
0930 - 1100	Technical Session Astronomy & Astrophysics		Class Room 207, Raza Block	
	Chair: Dr. Saeeda Sajjad, Former Professor, Institute of Space Technology, Pakistan Moderator & Co-Chair: Dr. Imran Ali Khan, Assistant Professor, Institute of Space Technology, Pakistan			
		Paper ID	Title of Presentation	Speaker
0930 - 0955	Keynote	Probing the Nature of the Prompt Emission of Gamma-Ray Bursts	Dr. Saeeda Sajjad	Institute of Space Technology, Pakistan
0955 - 1015	ICAST25-20-161	Vibrational Signal Classification: A Comparative Study of Abiotic and Biotic Signal Detection on Earth and Mars	Hafsa Akhtar	Attock Astronomical Society, Pakistan
1015 - 1035	ICAST25-83-313	CCD Photometry and Classification of GSC 03502-00138	Yawar Abbas	National Center of GIS & Space Applications, Pakistan

1035 - 1055	ICAST25-30-17	An Accessible Galactic Neutral Hydrogen Measurement Using a Kitchen Karahi	Mirza Sarim Ahmed Beg	Khwarizmi Science Society, Pakistan
0930 - 1100	Master Class Satellite System Engineering and A CubeSat Design Prof. Dr. Shufan Wu, Shanghai Jiao Tong University, China			Class Room 6228, Farooque Block
0930 - 1100	Master Class Moon Sighting-Scientific, Religious and Technological Perspectives Mohammad Shawkat Odeh, International Astronomical Center, United Arab Emirates			Class Room 6229, Farooque Block
1100 - 1130	Coffee / Networking Break			Eatery - Side Lawn
1130 - 1315	Plenary Session The Future of Earth Observation: From Satellites to Smart Decision-Making			Auditorium, Raza Block
	Moderator: Dr. Muhammad Shafique, National Center of Excellence in Geology, University of Peshawar, Pakistan			
	Title of Presentation	Speaker	Organization	
1135 - 1200	Satellite-Based Observations Supporting Ocean Environment and Climate Change Studies	Dr. Stefano Vignudelli	National Research Council of Italy (CNR), Italy	
1200 - 1225	Transforming Satellite Data into Actionable Insights through Geospatial Analytics	Dr. Shahid Iqbal	Researcher, Climate and Water System Modeling, Blue Green Nexus Pvt. Ltd., Pakistan	
1225 - 1250	Thermal Remote Sensing: Dual-Band Satellite Techniques for Accurate Heat Source Temperature Estimation	Dr. Muhammad Salman Ashraf	Earth Sciences, New Zealand	
1250 - 1315	National Earth Observation Program for Informed Policy and Resilient Development	Dr. Muhammad Farooq	Pakistan Space and Upper Atmosphere Research Commission, Pakistan	
1130 - 1315	Master Class Becoming an Astronaut: Training, Challenges, and the Road to Space Prof. Dr. Vladimir Pletser, Incharge Astronaut Training, Titans Space Industries, USA			Video Conference Room, Raza Block
1130 - 1315	Panel Discussion Empowering the Next Generation through Space Education and Public Engagement			Class Room 206, Raza Block
	Moderator: Dr. Najam Abbas Naqvi, Institute of Space Technology, Pakistan			

	Panelists		Organization	
	Dr. Mike Simmons		University of California, Los Angeles (UCLA), United States of America	
	Dr. Alim Rüstem Aslan		Istanbul Technical University, Türkiye	
	Dr. Muhammad Sharif		Islamic World Educational, Scientific and Cultural Organization (ICESCO), Morocco	
	Mr. Hamza Hameed		Access Partnership, Singapore	
1130 - 1315	Technical Session Aeronautics & Astronautics			Class Room 6201, Farooque Block
	Chair: Dr. Abdul Waheed, Institute of Space Technology, Pakistan Moderator & Co-Chair: Dr. Muhammad Waseem, Institute of Space Technology, Pakistan			
	Paper ID	Title of Presentation	Speaker	Organization
1130 - 1155	ICAST25-228-237	Flexible Joint Manipulator Control Using Super-Twisting Generalized Dynamic Inversion: Numerical Analysis and Experimental Investigations	Mr. Uzair Ansari	Pakistan Space and Upper Atmosphere Research Commission, Pakistan
1155 - 1215	ICAST25-75-72	Terminal Sliding Mode Control Strategy for a 2-Link Robotic Manipulator	Sadia Sadiq	Institute of Space Technology, Pakistan
1215 - 1235	ICAST25-144-148	Kinematic Simulation and Visualization of a Trajectory Following 6 DOF Stewart Platform, Utilizing MATLAB-Based Computational Techniques	Syed Qamber Abbas	Institute of Space Technology, Pakistan
1235 - 1255	ICAST25-310-269	Obstacle Detection and Localization on Lunar Surface Using Hybrid Learning	Sadaf Ahsan	Pakistan Space and Upper Atmosphere Research Commission, Pakistan
1255 - 1315	ICAST25-75-52	Swing Up and Disturbance Rejection for a Double Inverted Pendulum on a Cart Using DDPG and LQR	Ahmad Fasih Mehmood	Institute of Space Technology, Pakistan
1130 - 1315	Technical Session Positioning, Navigation & Timing			Class Room 6202, Farooque Block
	Chair: Dr. Salma Zaineb Farooq, Institute of Space Technology, Pakistan Moderator: Aiman Tassadaq, Institute of Space Technology, Pakistan			
	Paper ID	Title of Presentation	Speaker	Organization
1130 - 1155	ICAST25-74-98	Convolutional Neural Network-Enabled GPS and EGNOS Framework for Comparative Analysis of Positional Accuracy in Urban Constituency	Dr. Zeeshan Ali Memon	Dawood University of Engineering & Technology Karachi, Pakistan

1155 - 1215	ICAST25-223-210	Smartphone Positioning with Centimeter-Level Precision Using GBAS Service	Farah Uzma	Pakistan Space and Upper Atmosphere Research Commission, Pakistan
1215 - 1235	ICAST25-374-310	A Hybrid Wavelet Denoising Approach for Multipath Mitigation in GNSS Single Point Positioning	Aqsa Zulfiqar	Institute of Space Technology, Pakistan
1235 - 1255	ICAST25-87-50	Optimum Navigation Satellite Constellation Design for Pakistan Region Using Multi-Objective Genetic Algorithm	Daniyal Raza Kazmi	National Center of GIS & Space Application, Pakistan
1255 - 1315	ICAST25-88-88	Study of Ionosonde-Derived hmF2 and its Comparison With International Reference Ionosphere (IRI) Over Karachi During Solar Cycle 22	Riza Siddiqui	Habib University, Pakistan
1130 - 1315	Technical Session Environmental Science & Climate Change			Class Room 6203, Farooque Block
	Chair: Dr. Salman Atif, Associate Professor, National University of Sciences and Technology, Pakistan Moderator & Co-Chair: Dr. Munawar Shah, Institute of Space Technology, Pakistan			
	Paper ID	Title of Presentation	Speaker	Organization
1130 - 1155	Keynote	Glacial Environment and Growing Risk of GLOFs in Northern Pakistan	Dr. Salman Atif	National University of Sciences and Technology, Pakistan
1155 - 1215	ICAST25-186-262	AI-Based Emulator A Step Towards Predicting the Arctic Environmental Changes Using Hypothetical Historical Data	Syeda Saleha Ali	Institute of Space Technology, Pakistan
1215 - 1235	ICAST25-206-289	Leveraging Hydro-Meteorological Modelling for Identification of Rainwater Harvesting Sites in Nari Basin Using OpenLISEM	Rao Muhammad Saeed Ali	Pakistan Space and Upper Atmosphere Research Commission, Pakistan
1235 - 1255	ICAST25-165-271	Investigating Morphological Features of Martian Crater Near Eridania Basin Using Remote Sensing Techniques	Ayesha Elahi	Institute of Space Science, University of the Punjab, Pakistan
1255 - 1315	ICAST25-81-317	Enhancing Discharge Estimation in Data-Scarce Regions through Precipitation Error Correction and Hydrological Modeling	Omer Farooq	Muhammad Nawaz Shareef University of Agriculture, Pakistan
1130 - 1315	Technical Session Information & Communication Technologies			Class Room 6204, Farooque Block
	Chair: Dr. Shafi Ullah, Balochistan University of Information Technology, Engineering and Management Sciences, Pakistan Moderator: Ms. Shehla Gul, Lecturer, Institute of Space Technology, Pakistan			
	Paper ID	Title of Presentation	Speaker	Organization
1130 - 1155	Keynote	Academia–Industry Synergy for Smart Solutions and Startup-Driven Digital Transformation	Dr. Shafi Ullah	Balochistan University of Information Technology, Engineering and Management Sciences, Pakistan

1155 - 1215	ICAST25-151-150	Detection of Cyber Attack on Unmanned Aerial Vehicles	Abdul Manan Khan	Air University, Pakistan
1215 - 1235	ICAST25-144-151	Improving Visible Light Communication Signal Integrity on a Low-Cost Embedded Platform	Muhammad Hamza	Institute of Space Technology, Pakistan
1235 - 1255	ICAST25-254-287	Enhancing Wind Energy Efficiency for Climate Resilience: Wind Speed Prediction and Power Optimization Using ARIMA Modeling	Zohaib Mehmood Shah	National University of Technology, Pakistan
1255 - 1315	ICAST25-1-315	An Automated License Plate Recognition System (ALPR) Using YOLOv5 with Web Application in UAAR	Hira Tassadaq	National Center of GIS & Space Applications, Pakistan
1130 - 1315	Master Class Indigenous and Trusted IC Design for Space Science and Technology Dr. Haroon Waris, National Electronics Complex of Pakistan			Class Room 6228, Farooque Block
1315 - 1415	Luncheon Networking & Prayer Break			Eatery - Side Lawn
1415 - 1600	Plenary Session Enabling the Future: Smart, Small, and Sustainable Space Systems			Auditorium, Raza Block
	Moderator: Dr. Najam Abbas Naqvi, Institute of Space Technology, Islamabad, Pakistan			
		Title of Presentation	Speaker	
1415 - 1440	AI/ML Ecosystems for Sustainable Space Exploration		Dr. Aquib Moin	UAE University, United Arab Emirates
1440 - 1505	Satellite System Engineering and A CubeSat Design		Prof. Dr. Shufan Wu	Shanghai Jiao Tong University, China
1505 - 1530	Small Sats: State of Art		Dr. Alim Rüstem Aslan	Istanbul Technical University, Türkiye
1530 - 1555	Advancing Space Weather Research Using Affordable GNSS Receiver Networks		Dr. Anton Kashcheyev	University of New Brunswick, Fredericton, Canada
1415 - 1600	Seminar National Geospatial Infrastructure: Building Pakistan's Digital Future			Video Conference Room, Raza Block
	Moderator: Dr. Muhammad Shakir, Institute of Space Technology, Pakistan			

	Title of Presentation		Speaker	Organization
1415 - 1435	Exploring the potential of Satellites, LiDAR, and UAVs for a New Era of Precision Forestry		Dr. Sami Ullah Dawar	Kohsar University Murree, Pakistan
1435 - 1455	Geological Mapping in the Digital Era: Integrating Geospatial Data for Resource Assessment and Hazard Mitigation		Mr. Simon Sadiq	Geological Survey of Pakistan (GSP)
1455 - 1515	Climate Change and Security		Maria Zubair	Punjab Information Technology Board (PITB)
1515 - 1535	Transforming Governance and Urban Planning in Pakistan: The Geospatial Way Forward		Dr. Sheraz Ahsan	Founder, Spatial Hub
1535 - 1555	Geospatial Foundations for a Digital Pakistan		Dr. Zahir Ali	Pakistan Space and Upper Atmosphere Research Commission, Pakistan
1415 - 1600	Technical Session Space Law, Management & Outreach			Class Room 207, Raza Block
	Chair: Ms. Carolina Daza Tache, Access Partnership, Singapore Co - Chair & Moderator: Usama Ahmed, Institute of Space Technology, Islamabad			
	Paper ID	Title of Presentation	Speaker	Organization
1415 - 1435	ICAST25-67-39	Keeping Space Safe for Sustainable Development: Challenges for Space Law	Ghazala Yasmin Jalil	Institute of Strategic Studies, Pakistan
1435 - 1455	ICAST25-57-61	Space Law in the Age of Militarization and Commercialization	Safa Rehmat	Pakistan Institute of International Affairs, Pakistan
1455 - 1515	ICAST25-31-103	Shared Ownership of Government Owned Satellites Among Emerging Space Powers – A Governance Proposal	Zaeem Shabbir	Pakistan Navy Engineering College, National University of Sciences & Technology, Pakistan
1515 - 1535	ICAST25-225-209	Regulatory and Technological Challenges for Securing Orbital and Spectrum Resources at Geostationary Orbit	Sana Aijaz	Pakistan Space and Upper Atmosphere Research Commission, Pakistan
1535 - 1555	ICAST25-123-136	Ensuring Space Sustainability through Governance and Strategies for Managing Low Earth Orbit Debris	Muhammad Javed	National Defence University, Pakistan
1555 - 1615	ICAST25-87-306	Advancing Space Science Education in Pakistan: A Novel Initiative for Outreach, Capacity Building, and Sustainable Space Development	Daniyal Raza Kazmi	National Center of GIS & Space Application, Pakistan
1415 - 1600	Scientific Poster Session: Emerging Research and Applications			Poster Exhibition Arena, Raza Block

1415 - 1600	Technical Session Aeronautics & Astronautics			Class Room 6201, Farooque Block
	Chair: Dr. Raees Fida Swati, Institute of Space Technology, Pakistan Moderator: Syed Amber Ali Shah, Institute of Space Technology, Pakistan			
	Paper ID	Title of Presentation	Speaker	Organization
1415 - 1440	Keynote	Progressive Damage Modelling in Composite Structures for Aerospace Applications	Dr. Raees Fida Swati	Institute of Space Technology, Pakistan
1440 - 1500	ICAST25-151-158	Design, Development and Control of a Ducted Fan Uav	Abdul Manan Khan	Air University, Pakistan
1500 - 1520	ICAST25-122-326	Computational Fluid Dynamics Analysis of Atmospheric Turbulence in Wildfire Zones	Mohammad Zohaib	Institute of Space Technology, Pakistan
1520 - 1540	ICAST25-500-501	Analysis of Single Lap adhesive Joints using Digital Image Correlation (DIC)	Naseem Ahmad	Institute of Space Technology, Pakistan
1415 - 1600	Technical Session Satellite Technology			Class Room 6202, Farooque Block
	Chair: Dr. Moazzam Maqsood, Assistant Professor, Pak-Austria Fachhochschule: Institute of Applied Sciences and Technology, Pakistan Moderator & Co-Chair: Mr. Haroon Ibrahim, Lecturer, Institute of Space Technology, Pakistan			
	Paper ID	Title of Presentation	Speaker	Organization
1415 - 1440	Keynote	Problems and Challenges in IoT Applications Roll Out in Pakistan	Dr. Moazzam Maqsood	Pak-Austria Fachhochschule: Institute of Applied Sciences and Technology, Pakistan
1440 - 1500	ICAST25-64-44	Transforming Microsatellite Design for Remote Sensing: A Comprehensive Survey and Innovative Approach	Bilal Ali	Turkish Aerospace, Pakistan
1500 - 1520	ICAST25-37-78	Edge ML-Based CanSat: A Low-Cost Multipurpose Remote Sensing Solution	Umair Ahmed	Fazaia Inter College, Pakistan
1520 - 1540	ICAST25-193-195	A GaN-Based 100W Ku-band High Linearity Class-A Power Amplifier for Ground-Based Satellite Applications	Dr. Abdul Maalik	University of Central Punjab, Pakistan
1540 - 1600	ICAST25-323-284	A Fault-Tolerant CubeSat Electrical Power System Using Dual Microcontroller and Distributed PMU Architecture	Muteeb Khan	CECOS University of Information Technology and Emerging Sciences, Pakistan
1415 - 1600	Technical Session Remote Sensing & Geographic Information Science			Class Room 6203, Farooque Block
	Chair: Dr. Muhammad Adnan Shahid, Chairman, University of Agriculture Faisalabad, Pakistan Co-Chair & Moderator: Aneeqa Abrar, Jugrafiya, Pakistan			

	Paper ID	Title of Presentation	Speaker	Organization
1415 - 1440	Keynote	Flood Inundation Mapping and Agricultural Damage Assessment using Synthetic Aperture Radar (SAR) Data	Dr. Muhammad Adnan Shahid	University of Agriculture Faisalabad, Pakistan
1440 - 1500	ICAST25-55-27	Multi-Source Precipitation Data Validation and Drought Analysis Using Google Earth Engine	Syed Waqar Hussain Shah	Institute of Space Technology, Pakistan
1500 - 1520	ICAST25-224-254	Mapping Afforestation and Deforestation in Mangroves of Indus Delta Using Machine Learning Technique	Atif Shahzad	Pakistan Space and Upper Atmosphere Research Commission, Pakistan
1520 - 1540	ICAST25-314-292	A Remote Sensing Approach for Drought Assessment in Sindh Using Google Earth Engine	Dr. Rabia Tabassum	National University of Computer and Emerging Sciences, Pakistan
1540 - 1600	ICAST25-104-331	Assessing Forest Degradation in Swat Using MultiTemporal Sentinel-2 Imagery	Alauddin Awan	Institute of Space Technology, Pakistan
1415 - 1600	Technical Session Information and Communication Technologies			Class Room 6204, Farooque Block
	Chair: Professor Dr. Ahmar Rashid, GIK Institute of Engineering Sciences and Technology, Pakistan Moderator & Co-Chair: Dr. Madiha Tahir, Institute of Space Technology, Pakistan			
	Paper ID	Title of Presentation	Speaker	Organization
1415 - 1440	Keynote	From Sky to Space: AI-Enabled Vision for Sustainable Monitoring	Professor Dr. Ahmar Rashid	GIK Institute of Engineering Sciences and Technology, Pakistan
1440 - 1500	ICAST25-58-33	Enabling Effective Deforestation Mitigation via Wireless Sensor Network: Inline Hardware Design and Installation	Syed Ahmed Shah	National Center of GIS & Space Applications, Pakistan
1500 - 1520	ICAST25-144-152	Arduino-Based Optical Laser Communication System for Inter-Satellite Links Using PAM, PWM, and PPM	Huzaiifa Aziz	Institute of Space Technology, Pakistan
1520 - 1540	ICAST25-234-244	STA-DNN: A Hybrid Deep Learning Approach for Robust Channel Estimation in FSO-OFDM Systems	Usman Habib	Ghulam Ishaq Khan Institute of Engineering Sciences and Technology, Pakistan
1415 - 1600	Master Class Climate Change Impacts and Response with Fengyun Satellites Ms. Gao Ling, China Meteorological Agency, China			Class Room 6228, Farooque Block
1415 - 1600	Master Class Recent Trends in Artificial Intelligence for Earth Observation Dr. Sajid Ghuffar, Institute of Space Technology, Pakistan			Class Room 6229, Farooque Block
1930 - 2130	Heritage Tour & Dinner			By Invitation Only

Day 3, Thursday, November 20, 2025

Time (PKT) Hours	Program	Venue
0930 - 1100	Meet the Astronauts Forum	
	Auditorium, Raza Block	
	Master of Ceremony: Ms. Masuma Fatima, Space & Upper Atmosphere Research Commission, Pakistan	
	Title of Presentation	Speaker
		Organization
0930 - 0940	Introductions	
0940 - 1000	Enabling Human Presence in Space: Technology, Training and Cooperation	Mr. Alper Gezeravcı Turkish Space Agency (TUA)
1000 - 1020	Enabling Human Presence in Space: Technology, Training and Cooperation	Dr. J. Gurragchaа The Institute of Astronomy and Geophysics (IAG), Mongolia
1020 - 1040	Enabling Human Presence in Space: Technology, Training and Cooperation	Prof. Dr. Vladimir Pletser Titans Space Industries, United States of America
1040 - 1100	Panel Discussion	
0930 - 1100	Technology Exhibition Forum: Commercial Solutions for the Space Era	
	Video Conference Room, Raza Block	
	Moderator: Ahmer Rafi, Additional Director, Institute of Space Technology, Pakistan	
	Title of Presentation	Organization
0930 - 0950	Company Profile	CreatUnion, China
0950 - 1010	Company Profile	Shifang Satlink, China
1010 - 1040	Company Profile	Zero Gravity Labs, China

0930 - 1100	Master Class Climate Change Impacts and Response with Fengyun Satellites Ms. Gao Ling, China Meteorological Agency, China			Video Conference Room, Raza Block
0930 - 1100	Technical Session Space Law, Management & Outreach			Class Room 207, Raza Block
	Chair: Iftikhar Yazdani, Rah e Qamar, Pakistan Moderator & Co-Chair: Umaima Khan, National Center of GIS and Space Applications, Pakistan			
	Paper ID	Title of Presentation	Speaker	Organization
0930 - 0950	Keynote	Capturing the Attention Economy: Leveraging Audio-Visual Media to Engage the Next Generation with Space Outreach and Advocacy	Iftikhar Yazdani	Rah e Qamar, Pakistan
0950 - 1010	ICAST25-83-304	Lighting the Path to the Stars: Astronomy Outreach Initiatives by Space Education Research Lab	Yawar Abbas	National Center of GIS & Space Applications, Pakistan
1010 - 1030	ICAST25-201-333	Bridging the Cosmos and Communities: The Impact of Astronomy Outreach Through Public Engagement	Roshaan Nadeem	Institute of Space Technology, Pakistan
1030 - 1050	ICAST25-20-73	Developing a Space Ecosystem in Pakistan's Primary Schools through Multi-Stakeholder Engagement	Nasir Rizwan	Attock Astronomical Society, Pakistan
1050 - 1110	ICAST25-31-294	Space Technology & Pakistani Maritime Needs	Zaeem Shabbir	Pakistan Navy Engineering College, National University of Sciences & Technology, Pakistan
0930 - 1100	Technical Session Astronomy & Astrophysics			Class Room 6201, Farooque Block
	Chair: Dr. Lifang Hu, Northwestern Polytechnical University, China Moderator & Co-Chair: Dr. Imran Ali Khan, Institute of Space Technology, Islamabad			
	Paper ID	Title of Presentation	Speaker	Organization
0930 - 0950	Special Talk	The Role of mtDNA in Simulated Weightlessness-induced Osteocyte Senescence	Mr. Wenjin Zhong	Northwestern Polytechnical University, China
0950 - 1010	ICAST25-163-165	MicroRNAs based Biomarkers for Space-Induced Mood Disorders: Insights into Neurological Adaptation and Mental Health in Astronauts	Dr. Madiha Rasheed	Beijing Institute of Technology, China
1010 - 1030	ICAST25-45-109	A Machine Learning Approach for Habitable Exoplanet Discovery	Izba Iman	Muhammad Nawaz Shareef University of Agriculture, Pakistan

1030 - 1050	ICAST25-6-279	Feature Selection-Driven Machine Learning for Exoplanet Identification in the Kepler Dataset	Daniyal Shahzad Hamid	The Science School, Pakistan
0930 - 1100	Master Class Climate Change Impacts and Response with Fengyun Satellites Ms. Gao Ling, China Meteorological Agency, China			Class Room 6228, Farooque Block
1100 - 1130	Coffee / Networking Break			Eatery - Side Lawn
1130 - 1315	Plenary Session Space for Humanity: Integrating Science, Technology, Law, and Education			Auditorium, Raza Block
	Moderator: Dr. Najam Abbas Naqvi, Institute of Space Technology, Islamabad			
	Title of Presentation	Speaker		Organization
1130 - 1150	Improving Lives, Communities, and Societies through Space Exploration and Astronomy		Dr. Mike Simmons	University of California, Los Angeles (UCLA), United States of America
1150 - 1210	The Role of MACF1 in Weightlessness-Induced Osteoporosis		Dr. Lifang Hu	Northwestern Polytechnical University, China
1210 - 1230	Addressing the Regulatory and Policy Barriers to Unlocking the Potential Benefits of the Space Sector in Pakistan		Mr. Hamza Hameed	Access Partnership, Singapore
1230 - 1250	International Law and the Future of Space Resource Utilization - from Principles to Practice		Emeritus Prof. Dr. Steven Freeland	Western Sydney University, Australia
1250 - 1310	Next Generation Space Missions and a Rising Space Economy: Opportunities and Challenges		Dr. Xiaoliang Wang	Shanghai Jiao Tong University, China
1130 - 1315	Seminar Innovating the Future: Transformative Technologies in the Space			Video Conference Room, Raza Block
	Chair: Dr. Khurram Khurshid, Institute of Space Technology, Pakistan Moderator: Dr. Benish Amin, Institute of Space Technology, Pakistan			
	Title of Presentation	Speaker		Organization
1130 - 1150	RF Energy Harvesting for IoT Devices		Prof. Dr. Noshewan Shoaib	National University of Sciences & Technology, Pakistan
1150 - 1210	Analysis and Mitigation of Disturbances in Radar Interferometry Signals		Dr. Zeeshan Ali Memon	Dawood University of Engineering & Technology Karachi, Pakistan

1210 - 1230	Disaster Response System for Belt and Road (DRS4BR): Inferences from Machine Learning, Remote Sensing and GIS		Prof. Dr. Syed Amer Mahmood	University of the Punjab, Pakistan
1230 - 1250	Improved Gamma-Heating Rates for Superbursts		Prof. Dr. Jameel-Un Nabi	University of Wah, Pakistan
1250 - 1310	TBD		Hassan Abbas	Action Team on Lunar Activities Consultation (ATLAC), Pakistan
1130 - 1315	Panel Discussion Earth Observation and Remote Sensing: Transforming Data into Action			Class Room 206, Raza Block
	Moderator: Dr. Sami Ullah, Kohsar University Murree, Pakistan			
	Panelists			Organization
	Dr. Muhammad Salman Ashraf		Earth Sciences, New Zealand	
	Dr. Muhammad Shafique		National Center of Excellence in Geology, University of Peshawar, Pakistan	
	Dr. Stefano Vignudelli		National Research Council of Italy, Italy	
	Dr. Shafi Ullah		Balochistan University of Information Technology, Engineering and Management Sciences, Pakistan	
	Professor Dr. Shufan Wu		Professor, Shanghai Jiao Tong University, China	
1130 - 1315	Technical Session Aeronautics and Astronautics			Class Room 6201, Farooque Block
	Chair: Dr. Umer Sohail, Institute of Space Technology, Pakistan Moderator & Co-Chair: Fatima Hira, Lecturer, Institute of Space Technology, Pakistan			
	Paper ID	Title of Presentation	Speaker	Organization
1130 - 1155	ICAST25-75-70	Active Fault Tolerant Control of a Quadcopter Under Actuator Failure	Ammad Ahmed	Institute of Space Technology, Pakistan
1155 - 1215	ICAST25-62-146	Design and Acceleration Sensitivity Analysis of MEMS Tuning Fork Gyroscope (TFG)	Uzair Bashir	Beaconhouse National University, Pakistan

1215 - 1235	ICAST25-115-130	Digital Twin Approach for Thermal Testing of a 1U CubeSat	Aiza Hassan	Institute of Space Technology, Pakistan
1235 - 1255	ICAST25-437-332	Targeted Fertilizer Spraying Using UAV Based on AI-Driven Vigor Analysis	Rubab Shafique	Pakistan Space and Upper Atmosphere Research Commission, Pakistan
1130 - 1315	Technical Session Satellite Technology			Class Room 6202, Farooque Block
	Chair: Dr. Amena Ejaz Aziz, Institute of Space Technology, Pakistan Moderator & Co-Chair: Haroon Ibrahim, Lecturer, Institute of Space Technology, Pakistan			
	Paper ID	Title of Presentation	Speaker	Organization
1130 - 1155	Keynote	Performance, Challenges, and Innovations in Laser Inter-Satellite Communication Systems	Dr. Amena Ejaz Aziz	Institute of Space Technology, Pakistan
1155 - 1215	ICAST25-82-153	CanSat Design, Development and Launch for Atmospheric Data Collection	Umaima Khan	National Center of GIS & Space Applications, Pakistan
1215 - 1235	ICAST25-193-196	A GaN-Based 100W Ku-band High Efficiency Inverse-Class-F Power Amplifier for Onboard Satellite Applications	Dr. Abdul Maalik	University of Central Punjab, Pakistan
1235 - 1255	ICAST25-146-176	Navigating the Lunar Frontier: A Review of Navigation Satellite Constellation	Syed Shakaib Ahmad Maulai	Centers of Excellence in Science and Applied Technologies, Pakistan
1130 - 1315	Technical Session Remote Sensing & Geographic Information Science			Class Room 6203, Farooque Block
	Chair: Dr. Sajid Ghuffar, Institute of Space Technology, Pakistan Moderator & Co-Chair: Ms. Maham Siddique, Lecturer, Space Science, Institute of Space Technology, Pakistan			
	Paper ID	Title of Presentation	Speaker	Organization
1130 - 1155	ICAST25-214-211	Assessing the Impact of DSM Resolution on Urban Flood Simulation Using Physically Based Spatially Distributed Hydrological Model	Mateeul Haque	Pakistan Space and Upper Atmosphere Research Commission, Pakistan
1155 - 1215	ICAST25-158-163	Leaf Disease Detection and Quantification Using Different Color Spaces	Muhammad Huzaifa	National University of Sciences & Technology, Pakistan
1215 - 1235	ICAST25-318-293	From Data to Decarbonization: Leveraging AI for the Rational Design of Carbon Capture Nanomaterials	Rabeea Jaffari	Mehran University of Engineering & Technology, Pakistan
1235 - 1255	ICAST25-127-138	The Role of Space-based Solar Power in Achieving a Low-Carbon Economy	Hafsa Akhtar	Institute of Space Technology, Pakistan

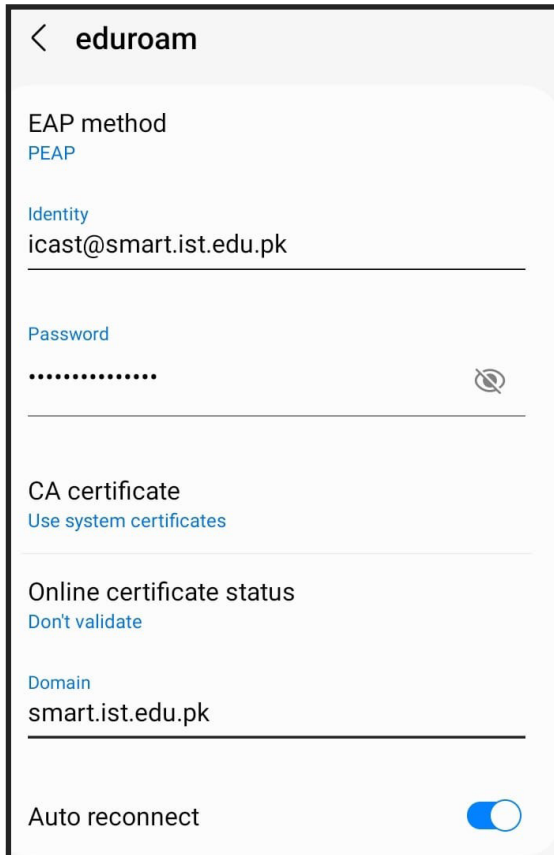
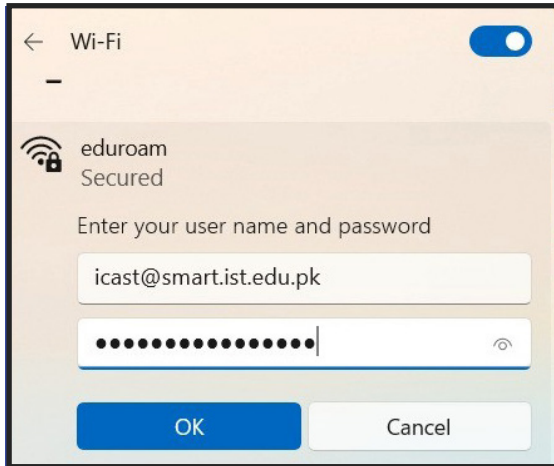
1130 - 1315	Technical Session Information & Communication Technologies			Class Room 6204, Farooque Block
	Chair: Dr. Komal Nain Sukhia, Institute of Space Technology, Pakistan Moderator & Co-Chair: Fizza Asif, Lecturer, Institute of Space Technology, Pakistan			
	Paper ID	Title of Presentation	Speaker	Organization
1130 - 1155	ICAST25-41-26	Framework for Cybersecurity in Space Systems through Integration of ISO 20517:2024 and ISO/IEC 27001:2022	Azhar Zia Ur Rehman	Air University, Pakistan
1155 - 1215	ICAST25-355-334	Adaptive Cyber Threat Intelligence Integration for Robust Cyber-Physical Systems Security	Nabeel Nasir	Auckland University of Technology, New Zealand
1215 - 1235	ICAST25-1-312	Conference Scheduler: A Smart Solution for Conflict-Free Event Planning	Hira Tassadaq	National Center of GIS & Space Applications, Pakistan
1130 - 1315	Master Class Strengths, Challenges, and Implications of Remote Sensing: Application for Mineral Mapping Prof. Dr. Mark van der Meijde, University of Twente, The Netherlands			Class Room 6228, Farooque Block
1130 - 1315	Master Class Extracting TEC from GNSS Data: Techniques for Space Weather and Ionospheric Analysis Dr. Anton Kashcheyev, University of New Brunswick, Canada			Class Room 6229, Farooque Block
1315 - 1415	Luncheon Networking & Prayer Break			Eatery - Side Lawn
1430 - 1530	Closing Ceremony			Auditorium, Raza Block
	Master of Ceremony: Mr. Usama Ahmed, Institute of Space Technology, Pakistan			
		Title of Presentation	Speaker	Designation & Affiliation
1430 - 1440	Recitation from the Holy Qur'an, National Anthem, Welcome Remarks by the Master of Ceremony			
1440 - 1450	ICAST 2025 Report		Dr. Najam Abbas Naqvi	Chairman, National Center of GIS and Space Applications (NCGSA)
1450 - 1455	Farewell Address		Dr. Syed Najeeb Ahmad	Vice Chancellor, Institute of Space Technology, Pakistan
1455 - 1500	Farewell Remarks		Mr. Muhammad Yousuf Khan	Chairman, Pakistan Space and Upper Atmosphere Research Commission, Pakistan
1500 - 1515	Chief Guest Remarks			

1515 - 1530	Ceremony Proceedings	
1530 - 1600	Farewell Tea	Eatery - Side Lawn
1930 - 2130	City Tour and Farewell Dinner	By Invitation Only

MAP OF IST

The **Institute of Space Technology (IST)** campus provides modern academic blocks, laboratories, and recreational areas within a secure, green environment. The ICAST 2025 venues, including the Raza Block Auditorium, Farooque Block classrooms, Exposition Arena, and Central Lawn. are all within a short walking distance of the main entrance and parking area. Directional signboards and volunteer ushers will guide delegates to session halls and exhibition zones.





WIFI LOGIN

Steps to Use Wi-Fi with eduroam [\(For Laptop Devices\)](#)

Connect with SSID “eduroam”.

Username: icast@smart.ist.edu.pk

Password: ist@123456789

Show password:

(you can tick this if you wish to check the password is entered correctly)

Steps to Use Wi-Fi with eduroam [\(For Mobile Devices\)](#)

Connect with SSID “eduroam”

EAP Method: PEAP (if you cannot see this option, it might be revealed by selecting the Show advanced options box at the bottom)

Phase-2 authentication: MSCHAPV2

CA certificate: Use System Certificate in some devices you have to select do not validate.

Online certificate status: Do not verify

Domain: smart.ist.edu.pk

Identity: icast@smart.ist.edu.pk

Anonymous identity: leave it as blank

Password: ist@123456789

Show password: (you can tick this if you wish to check the password is entered correctly: it will have no effect on the eventual configuration)

Leave any other options at their default settings.



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