



ICS - 2016

Technical Programme

SPACE SCIENCES | SPACE TECHNOLOGY | SPACE APPLICATIONS
SPACE LAW, POLICY & REGULATIONS | SPACE & YOUTH

ICS 2016 – The Technical Programme

Tuesday - 20 September 2016 (Day 01)

08:00 Registration Desk (for Attendees) will be available from 08:00 hrs onwards

Session 1 – The Inaugural Ceremony

09:15 - 11:25 **Venue:** COMSTECH Auditorium
 09:15 Guests to be seated
 09:45 Arrival of the Chief Guest
 10:00 Recitation from Holy Quran
 10:10 Inaugural address by Stage Secretary
 10:20 Welcome address by the Chairman SUPARCO
 10:35 Address by the Chief Guest
 10:50 - 11:55 Tea + Group photograph

Session 2 – The Plenary Session - I

12:00 - 13:30 **Venue:** COMSTECH Auditorium
 12:00 - 12:30 China's Space Activities: Mr. Tian YuLong, Secretary General CNSA, China
 12:30 - 13:00 Harnessing Space Applications for Societal Benefits: Dr. Noordin Bin Ahmad, DG ANGKASA, Malaysia
 13:00 - 13:30 Pak China Space Cooperation: Mr. Fu Zhiheng, Vice President CGWIC, China
 13:30 - 14:25 Lunch (55 mins)

Session 3 – The Plenary Session - II

14:30 - 16:00 **Venue:** COMSTECH Auditorium
 14:30 - 15:00 Dimensions and Challenges of Outer Space Activities - A perspective for Youth: Prof Dr. Li Xinjun, Secretary General APSCO, China
 15:00 - 15:30 Turkish Space Operations - Past, Present and Future: Dr. Serhend Arvas, Consultant TUBITAK UZAY, Turkey
 15:30 - 16:00 Development of Observational Astronomy in Pakistan: Dr. Shaukat Naaman Goderya, Director Program for Astronomy Education & Research, Texas, USA

Session 4 – Paper Presentation Session

4	Session 4A	Session 4B	Session 4C	Session 4D
	Space Technology Track: Satellites & Systems	Space Applications Track: Satellite Remote Sensing, Geographical Information System	Space Technology Track: Sensors, Components, Image Processing	Space Law, Policy & Regulations Track: Space Law, Policy & Regulations
16:15 - 17:35	Iqbal Room	Jinnah Room	Nishtar Room	Liaquat Room
16:15 - 16:35 (last 05 mins for Q/A)	Small Satellites, Space Technology Developments and Applications Alim Rustem Aslan Advisor to National Space Project Development Office, Turkey (KN)	New Applications for Spaceborne SAR Parviz Tarikhi Researcher Radar & LiDAR Section, Remote Sensing National Lab, Mahdasht (Alborz) Space Centre, Iranian Space Agency (KN)	Modelling of Indoor and Outdoor Environments using Range and Bearing Sensors Syed Riaz un Nabi Jafri Postdoc researcher, Dept of Earth Observation Sciences, ITC-University of Twente, Netherlands (KN)	Development of Space Law and the need for policy and regulatory framework Nasir Mahmood Randhawa DG External Relations & Legal Affairs, APSCO (KN)

4	Session 4A	Session 4B	Session 4C	Session 4D
	Space Technology Track: Satellites & Systems	Space Applications Track: Satellite Remote Sensing, Geographical Information System	Space Technology Track: Sensors, Components, Image Processing	Space Law, Policy & Regulations Track: Space Law, Policy & Regulations
16:15 - 17:35	Iqbal Room	Jinnah Room	Nishtar Room	Liaquat Room
16:35 - 16:55 (last 05 mins for Q/A)	Design of ISRASAT1 Passive Attitude Control System Eshraga Adel Altyb Abdalsalam Institute of Space Research & Aerospace (0156)	Analysis and Classification of Multi-temporal Aerial Thermal Infra-red Images Ausim Munir University of Hohenheim, Germany (0118)	Dev of Imaging Sensor Test Platform for High Resolution Cameras Muhammad Fahad Hasan SUPARCO (0214)	Effort to Develop a MATLAB Based Application for Checking Compliance of Satellite System Filings with Int'l Frequency Allocation Table (Article 5 of Radio Regulations) of ITU Somayyah Jurair SUPARCO (0233)
16:55 - 17:15 (last 05 mins for Q/A)	Design of Embedded Camera Link Frame Grabber and Processing System Usman Shehryar SUPARCO (0224)	Lithological Discrimination using Satellite Remote Sensing techniques at Bela, Balochistan Muaaz Shoukat SUPARCO (0183)	Use of Commercial Components for Spacecraft Applications Muhammad Najam Qadri SUPARCO (0210)	Small Satellites- Entrepreneurial Paradise and Legal Nightmare Hamza Abdul Hameed Leiden University, Netherlands (0301)
17:15 - 17:35 (last 05 mins for Q/A)	Structure of ISRASAT1 Cube Satellite Elzubeir Badawi Institute of Space Research & Aerospace Sudan (0122)	Investigation of land subsidence in coastal city of Karachi, Pakistan using InSAR Shamsa Kanwal Dept of Land Surveying & Geo Informatics, Hong Kong (0097)	FIFO Based Interconnection for Camera Link & Low Frequency CCD Camera Designs Muhammad Hammad Khan SUPARCO (0209)	
17:40 - 18:00	Tea: 20 mins			
The End of Day 01				

ICS 2016 – The Technical Programme

Wednesday - 21 September 2016 (Day 02)

Session 5 – Paper Presentation Session

5	Session 5A	Session 5B	Session 5C	Session 5D
	Space Technology Track: Structures, Propulsion, Smart Materials	Space Applications Track: Geo Spatial Technology Applications	Space Technology Track: GNSS Technology & Applications	Space Applications Track: Disaster Monitoring & Management using RS / GIS
09:00 - 11:00	Iqbal Room	Jinnah Room	Nishtar Room	Liaquat Room
09:00 - 09:20 (last 05 mins for Q/A)	A&S Derivatives: A backbone for HB Aerial Vehicle's Design for Space and Green Applications Anwar ul Haq Kulliyah of Engineering, International Islamic University Malaysia (0324)	A comparison between ALOS-2 PaLSAR-2, Airborne Lidar and Terrestrial Lidar Scanner in assessing above ground biomass/ carbon in tropical rain forest for climate change studies Yousif Ali Hussin Faculty of Geo-University of Twente Information Science (KN)	On the Selection Consideration and Functionality Validation of GNSS RF Front-Ends Dr. Faisal Ahmed Khan SUPARCO (0269)	Seismic Activities in Hindukush Region 2015 - 2016 Engr. Syed Muhammad Ayub Shah NDMA (0365-a)
09:20 - 09:40 (last 05 mins for Q/A)	Development and Mechanical Response of Entangled Fiber Network Core Sandwich Material for Space Structures Muhammad Arslan Mehmood Hunjra SUPARCO (0199)	Groundwater Prospection using GIS and Remote Sensing Techniques in Thar Desert Muhammad Badar Munir SUPARCO (0184)	Digital Elevation Modeling of Karachi Utilizing the Multi-Global Navigation Satellite System (GNSS) based Real Time Kinematic (RTK) Network Technology Syed Zahid Jamal SUPARCO (0268)	Monitoring and Mapping Avalanches and their Hazards in Pakistan Glaciers using RS&GIS Techniques Zafar Iqbal Zafar Stuttgart University, Germany (0162)
09:40 - 10:00 (last 05 mins for Q/A)	Comparison of Erosion Rates of Kevlar and Asbestos Reinforced EPDM Muhammad Omer SUPARCO (0274)	Above-ground Carbon Stock Assessment using Geospatial Technologies Atif Shahzad SUPARCO (0307)	GNSS Based Vehicle Monitoring & Tracking System Zakaria Khan IST (0096)	Damage Assessment Using Spatial and Temporal Analysis and Geo Computation Techniques Basharat Iqbal NDMA (0366)

10:00 - 10:20 (last 05 mins for Q/A)	Effect of Process Parameters on Formability of Aluminum 2024 Irfan Mahmood Khan SUPARCO (0217)	Comparison of three years TerraSAR-X Backscatter Signatures of Corn and Wheat by using Temperature and Precipitation Data Atif Ishaq University of Hohenheim, Germany (0049)	Monitoring GNSS Data Availability for Permanent Base Stations Maria Mehmood SUPARCO (0245)	Inventory Management for National Disaster Management Authorities Using QR Codes Saqib Nisar SUPARCO (0182)
10:20 - 10:40 (last 05 mins for Q/A)	Optimization of welding procedure and its impact on properties of elastomeric diaphragm for positive expulsion device Danish Noman SUPARCO (0264)	Determination of flood inundation using TerraSAR-X SAR intensity imagery Iqra Riaz IST (0110)	Risk and Vulnerability Analysis of Global Navigation Satellite System Muhammad Muneeb Sheikh SUPARCO (0242)	Estimations of Flood Frequency Analysis Using Extremity Values Maria Saeed NDMA (0364)
10:40 - 11:00 (last 05 mins for Q/A)	Experimental Testing and Qualification of Supersonic Diffusers Running In a Cold Flow Scenario with Diverse Operating Conditions Syed Zia ur Rehman SUPARCO (0272)	Mapping of Erosion \ Accretion in Indus Delta Creeks and Sindh Coastline Using Remote Sensing and GIS Muddassar Umar SUPARCO (0216)	Performance and comparison analysis of PoiNT using low cost GNSS Receivers Dr. Arif Iqbal SUPARCO (0259)	Information and Communication Technologies in Disaster Risk Reduction Engr. Syed Muhammad Ayub Shah NDMA (0365-b)
11:00 - 11:25	Hi Tea: 25 mins			

Session 6 – Paper Presentation Session

	Session 6A	Session 6B	Session 6C	Session 6D
	Space Technology Track: Structures, Propulsion, Thermal, Smart Materials	Space Science Track: Space Weather, Ionospheric & Gravitational Research, Microgravity	Space Applications Track: Remote Sensing in Atmospheric & Environmental Sciences	Space Technology Track: Satellite Technology, Radio Frequency
11:30 - 13:00	Iqbal Room	Liaquat Room	Jinnah Room	Nishtar Room
11:30 - 11:50 (last 05 mins for Q/A)	Verification & Validation of flow over a 3D ONERA Wing using ANSYS-Fluent® Muhammad Umer Sohail IST (0177)	Wavelet Interpretation of Maximum Useable frequency (MUF) for Solar - Terrestrial region of Pakistan Dr. Ayub Khan Yousufzai Dept of Applied Physics, UoK (0262)	Satellite Radar Altimetry Supporting Coastal Ocean Studies Stefano Vignudelli Consiglio Nazionale Delle Ricerche (CNR), Pisa, Italy (KN)	Micro/Nano-Satellite Technologies and Application Dr. Shufan Wu Deputy Chief Technical Officer Shanghai Engineering Centre for Microsatellites (SECM), Director of New Technology Department, China (KN)

	Session 6A	Session 6B	Session 6C	Session 6D
		Space Technology Track: Structures, Propulsion, Thermal, Smart Materials	Space Science Track: Space Weather, Ionospheric & Gravitational Research, Microgravity	Space Applications Track: Remote Sensing in Atmospheric & Environmental Sciences
11:30 - 13:00	Iqbal Room	Liaquat Room	Jinnah Room	Nishtar Room
11:50 - 12:10 (last 05 mins for Q/A)	Effect of SiO ₂ and TiO ₂ Fillers on Mechanical Properties of Carbon Fibre Reinforced Composite Material Muhammad Suleman Chatta SUPARCO (0206)	ULF Waves Observations in the Magnetosphere and on the Ground Asif Ali Abbasi ISPA UoK (0079)	Climate Change Impact Assessments of a Selected Area of Himalaya Glaciers of Pakistan Using RS & GIS Hafiz Ali Imran University of Hohenheim (0052)	Accurate 3D Characterization of Spacecraft Antenna System through Spherical Near Field Scanning Ismatullah SUPARCO (0212)
12:10 - 12:30 (last 05 mins for Q/A)	Cost Effective Synthesis and Multistep Purification of Multiwall Carbon Nanotubes (MWCNTs) for Space Applications Madni Shifa Ullah Khan SUPARCO (0205)	Design and Development of 2D and 3D Clinostat Adnan Khan SUPARCO (0192)	Comparison of Remote Sensing Algorithms for Discrimination of Major Rock Units Using Aster Data at Lakhra Anticline, Sindh Muhammad Anees SUPARCO (0185)	Design of Annular ring patch antenna for circular polarization using dual dielectric substrate layers Zeenat Rajar SUPARCO (0195)
12:30 - 12:50 (last 05 mins for Q/A)	3-D Thermal Finite Element Analysis of Single Pass Aluminum Butt Welded GTAW Joint Muhammad Adeel SUPARCO (0273)	Comparison of Two Gravity Recovery Algorithms Based on the Variational Equation Approach Muhammad Athar Javaid Uni Stuttgart Germany (0071)	Modelling of Flash Flood Hazard in Wadi Baabaa, Sinai, Egypt using TRMM Satellite Data and GIS Techniques Dina Ragab National Authority for Remote Sensing and Space Sciences, Cairo, Egypt (0367)	Design of 16 Elements of C Band Patch Array Antenna using Corporate Feed Network Wasim Nawaz SUPARCO (0194)
12:50 - 13:10 (last 05 mins for Q/A)		The Effects of Space Weather on Satellites Mohammed Yahya Alradi Institute of Space Research & Aerospace, Sudan (0120)	GIS for Utility and Resource Analysis in an Urban Perspective (A Case Study of N. Nazimabad, Karachi) Muhammad Tayyab Afzal K Electric Ltd, Khi (0221)	Design and Optimization of Multi- band Co-Planar Wave Micro-strip Patch Antenna Muhammad Saad Sohail SUPARCO (0204)
13:00 - 13:55	Lunch 55 mins			

Session 7 – The Seminar Session

The Astronaut Training Programme

14:15 - 17:10	Venue: COMSTECH Auditorium
14:10	Guests to be seated
14:15 - 14:25	Welcome address and introduction by the Coordinator
14:25 - 15:10	The story of an Astronaut - the Malaysian Astronaut: Dr. Sheikh Muszaphar, First Malaysian Astronaut
15:15 - 16:00	Radiation and Microgravity: Limiting Factors for Human Space Travel: Dr. Christa Baumstark-Khan, Institute of Aerospace Medicine - German Aerospace Center (DLR)
16:00 - 16:10	Stretch Break
16:10 - 16:55	Mars One, One Way Trip to the Planet Mars: Mr. Reginald Foulds, Office of the Fire Marshal and Emergency Management, Ontario Ministry of Community Safety and Correctional Services
17:00 - 17:10	Closing address by the Session Chair
17:10 - 17:30	Hi Tea (20 mins)


The End of Day 02

ICS 2016 – The Technical Programme

Thursday - 22 September 2016 (Day 03)


Session 8 – Paper Presentation Session

	Session 8A	Session 8B	Session 8C	Session 8D	Session 8E
	Space Technology Track: GNSS Technology & Applications	Space Applications Track: Satellite Remote Sensing, Geographical Information System	Space Technology Track: Structures, Propulsion, Smart Materials, Target Tracking	Space & Youth Track: Space & Youth	Space Applications Track: Satellite Remote Sensing, Geographical Information System
09:00 - 10:40	Nishtar Room	Iqbal Room	Liaquat Room	Jinnah Room	Johar Room
09:00 - 09:20 (last 05 mins for Q/A)	PoiNT-QC – A tool for GNSS Data Quality Control Parameters Dr. Arif Iqbal SUPARCO (0260)	Earth Observation Based Rangeland Quality Assessment: Progress from Local to Regional Scales Abel Ramoelo Council for Scientific and Industrial Research (CSIR) (KN)	Comparative Study of Parallel and Cross Direction Nickel Coated Short Carbon Fibers Filled Thermoplastic Susceptor Sheet for Induction Heating Application Muhammad Muddassir SUPARCO (0257)	Importance of Celebration of World Space Week in National Educational System Goran Nikolasevic Operations Manager, World Space Week Association, Hrvatsko, Croatia (KN)	Assessing the Potential of Landsat-8 Normalized Difference Water Index (NDWI) for Monitoring Dengue in Lahore, Pakistan Sadaf Javaid IST (0133)

	Session 8A	Session 8B	Session 8C	Session 8D	Session 8E
		Space Technology Track: GNSS Technology & Applications	Space Applications Track: Satellite Remote Sensing, Geographical Information System	Space Technology Track: Structures, Propulsion, Smart Materials, Target tracking	Space & Youth Track: Space & Youth
09:00 - 10:40	Nishtar Room	Iqbal Room	Liaquat Room	Jinnah Room	Johar Room
09:20 - 09:40 (last 05 mins for Q/A)	Comparison of Astronomical Azimuth with the GNSS Azimuth using Pak Rehber CORS Network Safdar Khan SUPARCO (0287)	Topographic Mapping of Mars using Dense Image Matching of HiRISE Stereo Imagery Mahnour Nadeem IST (0280)	Design of Altitude Measurement System for Aerospace Applications (Digital Barometric Altimeter) Nasreldeen Ali Adam Institute of Space Research and Aerospace, Sudan (0088)	Space is an opportunity and frontier of new knowledge generation Dr. Mobushar Riaz Khan Director UIIT, PMAS-Arid Agriculture University, Rwp (KN)	Assessment of hydrological parameters for the Porali River Basin using GIS and SCS curve number approach Babar SUPARCO (0181)
09:40 - 10:00 (last 05 mins for Q/A)	Empirical Analysis of Signal Quality Monitoring Techniques for GNSS Signals under Different Environmental Conditions S.Shakaib Ahmad Maulai AERO Central Registry, Hazara Road Hassan Abdal (0132)	Design and Implementation of a geodatabase and WebGIS Sajid Ali University of Hohenhem, Germany (0103)	A performance analysis of single target tracking algorithm for the imagery data Shoaib Sajid Comsats Institute of IT, Abbottabad (0232)	Space Education & its significance Muhammad Kashif Saleem Manager - Learning Technologies AGA Khan Education Service, Pakistan Islamabad (KN)	Food Facility Monitoring and Evaluation System using Public Participatory GIS (PPGIS) Rehan Aftab IST (0113)
10:00 -10:20 (last 05 mins for Q/A)	Real Time Monitoring of Global Navigation Satellite System signal Farah Uzma SUPARCO (0281)	Spatio-temporal Trend Analysis of Sea Surface Temperature (SST) over Extended Exclusive Economic Zone (EEZ) of Pakistan Shaikh Abdullah SUPARCO (0215)	Performance analysis of multi-target algorithm for different surveillance conditions Muhammad Asad Javid Tareen Comsats Institute of IT, Abbottabad (0231)	Teaching Tools for Web Processing Services Rashid Javed University of Stuttgart, Germany (0067)	Development of Karachi GIS using Location Based Services (LBS) Aamir Ali SUPARCO (0196)

10:20 - 10:40 (last 05 mins for Q/A)	Monitoring Structural Deformation Using Network RTK Syed Fawad Zulfiqar SUPARCO (0288)		Effects of the Welding Heat on the Post-Age Properties of Maraging 250 Steel Abdul Rafey Khan SUPARCO (0267)		
10:40 - 11:00	Hi Tea 20 mins				

Session 9 – Paper Presentation Session

	Session 9A	Session 9B
		Space Technology Track: Ground Segment, Telecommunications, Power
11:00 -12:00	Jinnah Room	Iqbal Room
11:00 -11:20 (last 05 mins for Q/A)	Components selection of ISRASAT 1 Ground Station Rugaia Abd Elrahman Sudan (0142)	Exploitation of Geospatial Techniques for Ambulance Functionalities Mehreen Saba IST (0243)
11:20 - 11:40 (last 05 mins for Q/A)	Visible light communications – An untapped potential of telecommunications industry Engr Akhtar Saeed DHA Suffa University, Khi (0084)	Application of Remote Sensing Data and Hazard Modeling Shaikh Abdullah SUPARCO (0211)
11:40 - 12:00 (last 05 mins for Q/A)	Satellite constellation to increase fuel efficiency Bilal Rasul IST (0126)	Species distribution modeling of invasive Mulberry(Broussonetia papyrifera) in Islamabad Basil Tufail IST (0296)

Session 10 – The Poster Review Session

Coordinator: Dr. Amir Obaid Khattak (Associate Professor, IST)
12:00 - 13:00 Poster Review Session

Sr. No.	Name & Poster ID	Affiliation	Poster Title
1	Muhammad Athar Javaid (0072)	Uni Stuttgart, Germany	Data mining for Monthly Spherical Harmonics (SH) Coefficients from GRACE satellite
2	Zeeshan Haider Hashmi (0087)	IST, Isb	Continuous Operating Reference Station (CORS) network design for Pakistan to study tectonic plates movement

Sr. No.	Name & Poster ID	Affiliation	Poster Title
3	Syed Muhammad Zubair Younis (0089)	NUST, Isb	Soil Suitability Analysis for Precision Agriculture using Remote Sensing and GIS Techniques
4	Rizwan Ashfaq (0106)	IST, Isb	GNSS integrated GSM MDI System
5	Daniyal Suhail Malik (0108)	IST, Isb	Design and Development of a Plasma Micro Thruster
6	Yasir Ahmed Idris Humad (0119)	ISRA	Design and Implementation of Communication Subsystem for ISRASAT1 CubeSat
7	Shakir Hussain Chaudhry (0131)	IST, Isb	Structure Design Optimization of Cubesat
8	Muhammad Nouman (0163)	NUST EME	Modified Programmable Logic Controller Trainer and its Applications
9	Noman Subhani (0198)	SUPARCO	Impact of Antenna Orientation on Received Signal Strength
10	Muhammad Fahad Hasan (0213)	SUPARCO	Development Plan of Harness model for Small Satellites
11	Muhammad Fayyaz (0239)	IST, Isb	Structural Health Monitoring for Disaster Management Using GNSS
12	Farzana Naseem (0244)	IST, Isb	Mapping Urban Areas of Pakistan using Night Time Light Data
13	Saima (0251)	IST, Isb	Delineate Geological Structures, Geomorphic features and Lithological variations of Lakhra Coal field
14	Syed Waqas Hashmi (0271)	SUPARCO	Design and development of indigenous prototype thermal vacuum chamber
13:00 - 13:55		Lunch (55 mins)	

Session 11 – Panel Discussions

11	Session 11A	Session 11B	Session 11C	Session 11D
	Space Technology	Space Science	Space Applications	Space & Youth
	Jinnah Room	Iqbal Room	Liaquat Room	Nishtar Room
14:00 - 15:00	Topic: The Challenges of Small Satellite Systems to the Space Security Environment	Topic: Investing in Human Space Exploration Programs	Topic: End to End Remote Sensing - Approaches & Challenges	Topic: The Next Frontier for Ambitious Entrepreneurs: Space

Session 12 – The Closing Ceremony

15:10 - 17:00

15:10
15:15
15:20
15:30
15:45
16:00
16:15 - 16:35
16:55
17:00 - 17:30

Venue: COMSTECH Auditorium

Guests to be seated
Arrival of the Chief Guest
Recitation from Holy Quran
Summary of the Conference by Stage Secretary
Vote of Thanks by the Conference Organizer
Address by the Chief Guest
Certificates & Souvenirs distribution
Group photograph of all the participants
Hi Tea (30 mins)

The End of ICS 2016