



International Conference
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ANSO



ANSO-COMSATS Conference on Artificial Intelligence (AI) Enabled Solutions for Sustainable Water Governance, Security and Safety

22-25 September 2026 | COMSATS University Islamabad (CUI)

Conference Program (Tentative)

Day 1: Tuesday, 22-Sep-26	
Inaugural Session: 10:00-11:00	
10:00-11:00	Speeches/ Remarks by - Ambassador Dr. Mohammad Nafees Zakaria Executive Director, COMSATS - Prof. Dr. Raheel Qamar Rector, COMSATS University Islamabad (CUI), Pakistan - Mr. Arif Goheer Executive Director, Global Climate-Change Impact Studies Center (GCISC) - Dr. Zhijun YI Deputy Executive Director, ANSO - The Chief Guest
11:00 – 11:30	Refreshments
Technical Session 1: AI and Citizen Science for Water Safety 11:30 – 13:35	
11:30 – 11:55	Prediction of Constructed Treatment Wetland Performance with K-Nearest Neighbors and Neural Networks by DProf. Dr. Miklas Scholz, Distinguished Professor / Head of Office, Civil Engineering and Municipal Services, Germany
11:55 – 12:20	
12:20 – 12:45	From Observation to Action: Digital Twins for Sustainable Groundwater Governance

	by Dr. Muhammad Ashraf, Country Representative (Pakistan), International Water Management Institute (IWMI) (Former Chairman PCRWR, Islamabad, Pakistan)
12:45 – 13:10	Building the Foundation for AI-Enabled Groundwater and Surface Water Monitoring in Pakistan by Dr. Hifza Rasheed, Director General, Pakistan Council of Research in Water Resources, Pakistan
13:10 – 13:35	Talk/ Presentation by Prof. Dr. Philippe De Maeyer, Professor, Ghent University, Belgium (Online)
13:35 – 14:30	Lunch
Technical Session 2: Data-Driven Approaches to Water Security 14:30 – 16:35	
14:30 – 14:55	Talk/ Presentation by Prof. Alishir Kurban, Professor, Xinjiang Institute of Ecology & Geography (XIEG), Chinese Academy of Sciences (CAS), China
14:55 – 15:20	Water-Mediated Land-Atmosphere Feedbacks in Drylands: From Aral Sea Shrinkage to Oasis Irrigation by Prof. Yuan Xuliang, Researcher / Scientist, Xinjiang Institute of Ecology & Geography (XIEG), Chinese Academy of Sciences (CAS), China
15:20 – 15:45	Sustainable Water Resources Management/ Digitalization and Data-Driven Decision Making by Prof. Dr. Mohamed Saleem Elfleet, Professor, King Abdulaziz University, Saudi Arabia
15:45 – 16:10	National Real-Time Surface Water Quality Monitoring as a Model for Smart Water Governance, Decision Support, and National Water Security by Dr. Farouq Alomari, Manager, Royal Scientific Society (RSS), Jordan
16:10 – 16:35	Digital Twins for Climate Smart Water Management in a River Basin by Dr. Mohsin Hafeez, Director, International Water Management Institute (IWMI), Pakistan

16:35 – 17:00	Tea / Networking
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Day 2: Wednesday, 23-Sep- 26	
Technical Session 3: AI for Agricultural Water Management	
09:00 – 11:05	
09:00 – 09:25	Determining the Level of Intelligence and Sustainability Required for Agricultural Water Management (Online) by Dr. Abdelraouf Ramadan Eid Abdelghany, Professor, National Research Centre (NRC), Egypt
09:25 – 09:50	Decoding the Clouds: AI-Powered Rainfall Prediction in the Upper Indus Basin by Prof. Dr. Muhammad Shoaib, Professor, Bahauddin Zakaria University, Multan, Pakistan
09:50 – 10:15	A Multi-Temporal Approach for Soil Property Estimation Using 5-Year Sentinel-2 Time Series (Online) by Dr. Cihangir Aydoğan, Senior Researcher, Climate and Life Sciences Vice Presidency, TÜBİTAK Marmara Research Center (MAM), Türkiye
10:15 – 10:40	Assessment of the performance of a low-cost soil moisture sensor in laboratory and field conditions(Online) by Dr. Burcu Uyuşur Kıran, Chief Senior Researcher, Climate and Life Sciences Vice Presidency, TÜBİTAK Marmara Research Center (MAM), Türkiye
10:40 – 11:05	AI Tools and Resources: Applications in Monitoring Water Pollution and Treatment by Prof. Dr. Kenneth Yongabai, Imo State University, Nigeria
11:05 – 11:30	Tea / Networking
Technical Session 4: AI for Decision Support in Water Governance	
11:30 – 13:35	
11:30 – 11:55	Bridging Data Gaps in Water Governance and Equity through Artificial Intelligence: Pathways for Jamaica (Online) by Dr. Shaneica Lester, Environmental Geographer and Lecturer, The University of the West Indies, Jamaica

11:55 – 12:20	Smart Water Governance: An AI-Powered Approach (Online) by Prof. Hossain Azadi, Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences, China
12:20 – 12:45	From AI Pilots to AI-Native Institutions: Building Decision-Support Systems for Sustainable Water Governance by Ms. Mahnoor Salman, Specialist Business Innovation and Transformation at Power Planning & Monitoring Company (PPMC), Ministry of Energy (Power Division), Pakistan
12:45 – 13:10	The Autonomous Geospatial Intelligence and Learning Engine for AI-Enabled Environmental Monitoring and Decision Support (AGILE) by Mr. Asim Javid, Chief Executive Officer (CEO), AI Geo Navigators, Pakistan
13:10 – 13:35	Real-Time Water Quality Monitoring with IoT, AI, and Cloud-Native Architecture by Mr. Qasim Malik, Department of Computer Sciences, COMSATS University Islamabad, Islamabad, Pakistan
13:35 – 14:30	Lunch
Hands-on Training 14:30 – 16:30	
14:30 – 15:30	Hands-on Training on Stata by Prof. Dr. Mumtaz Ahmed, Professor, COMSATS University Islamabad, Pakistan
15:30 – 16:30	Hands-on Training on RStudio (Online) by Dr. Anwar Eziz, Post-Doctoral Researcher, Xinjiang Institute of Ecology & Geography (XIEG), Chinese Academy of Sciences(CAS), China
16:30 – 17:00	Tea / Networking

Day 3: Thursday 24-Sep-26

Technical Session 5: Smart Water Resource Monitoring and Forecasting
09:00 – 11:05

09:00 – 09:25	Shared Rivers, Shared Risks: Remote Sensing and AI for Equitable Trans-boundary Water Management by Prof. Dr. Toqeer Ahmed, Professor, COMSATS University Islamabad, Pakistan
09:25 – 09:50	Geospatial and Machine Learning Approaches for Floodwater Monitoring and Reservoir Management by Prof. Dr. Muhammad Farooq Iqbal, Associate Professor, COMSATS University Islamabad, Pakistan
09:50 – 10:15	GIS and Simulation Models in Smart Rainwater Management in Agriculture (Online) by Dr. Abdelraouf Ramadan Eid Abdelghany, Professor, National Research Centre (NRC), Egypt
10:15 – 10:40	Numerical Simulations of Wind and Temperature under Complex Mountainous Terrain and their Potential Effects on Glaciers and Snowmelt by Prof. Dr. Mingyuan DU, Professor, Xinjiang Institute of Ecology and Geography (XIEG), Chinese Academy of Sciences (CAS), China
10:40 – 11:05	From Signal to Decision: Multichannel Signal-Processing Approaches for Smart Water Resource Monitoring and Forecasting by Prof. Dr. Ir. Adhi Dharma Wibawa, Head, Center for Artificial Intelligence and Digital Technology Studies, Institut Teknologi Sepuluh Nopember (ITS), Indonesia
11:05 – 11:30	Tea / Networking

Technical Session 6: Role of AI and IoT in Real-Time Water Quality Management
11:30 – 13:35

11:30 – 11:55	Comparative Analysis of Machine Learning Algorithms for Water Quality Prediction by DProf. Dr. Miklas Scholz, Distinguished Professor / Head of Office, Civil Engineering and Municipal Services, Germany
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11:55 – 12:20	
12:20 – 12:45	Talk/ Presentation by Dr. Muhammad Fasih Uddin Butt, COMSATS University Islamabad
12:45 – 13:10	Application of Artificial Intelligence (AI) as a Tool for Detecting Micro-Plastic Pollution: Projections and Challenges by Dr. Samina Ahmed, Chairman, Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh
13:10 – 13:35	Smart Water Management: IoT and Machine Learning Framework for Integrated Water Quality Monitoring and Automated Control (Online) by Engr. Mohammad Forhad Hossain, Senior Engineer, Bangladesh Council of Scientific and Industrial Research (BCSIR)
13:35 – 14:30	Lunch
Panel Discussion 14:30 – 16:00	
	Moderator: Prof. Dr. Ir. Adhi Dharma Wibawa (Indonesia) • Prof. Dr. Alishir Kurban (China) • Dr. Farouq Alomari (Jordan) • Dr. Hifza Rasheed (Pakistan) • Prof. Dr. Kenneth Anchang Yongabi (Nigeria) • Dr. Samina Ahmed (Bangladesh) • DProf. Dr. Miklas Scholz (Germany) • Prof. Dr. Mohamed Elfleet (Saudi Arabia) • Dr. Shaneica Lester (Jamaica)
16:30 – 17:00	Tea / Networking

Day 4: Friday 25-Sep-26	
Technical Session 7: Impact, Emerging Trends, and Pathways to Scalable AI Solutions for Water Sustainability 09:00 – 10:40	
09:00 – 09:25	An AI-Ready Multi-Source Framework for Harmful Algal Bloom Monitoring and Early Warning in Subtropical Reservoirs by Dr. Muhammad Zahir, Asst. Professor, CUI, Islamabad, Pakistan
09:25 – 09:50	Assessing the Maturity of AI Ethics in AI-enabled Water Governance, Safety & Security by Mr. Azhar Zia-ur-Rehman, International AI Governance Consultant, OrientMCT, UAE/Pakistan
09:50-10:15	Semantic Knowledge Graphs for Sustainable Water Governance: Integrating Data, Policy, and AI for Smart Water Management by Prof. Dr. Imran Ihsan, Chair, Department of Creative Technologies, Air University, Islamabad, Pakistan
10:15-10:40	Representative of WHH
Closing Session 11:00 – 11:30	
	Speeches/ Remarks by - Ambassador Dr. Mohammad Nafees Zakaria Executive Director, COMSATS - Prof. Dr. Raheel Qamar Rector, COMSATS University Islamabad (CUI) Chief Guest
11:30 – 12:00	Refreshments
12.00 – 14:30	Prayer and Lunch
14:30 – 16:30	Visit of Foreign Experts to PCRWR Laboratories