

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

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

Conference Program (Tentative)

Day 1: Tuesday, 22-Sep-26	
Inaugural Session	
10:00-10:05	**Recitation from Holy Quran**
10:05-10:10	Remarks by **Ambassador Dr. Mohammad Nafees Zakaria**, Executive Director, COMSATS
10:10-10:15	Remarks by **Prof. Dr. Raheel Qamar**, Rector, COMSATS University Islamabad (CUI), Pakistan
10:15-10:20	Remarks by **Mr. Arif Goheer**, Executive Director, Global Climate-Change Impact Studies Center (GCISC), Pakistan
10:20-10:25	Remarks by **Dr. Zhijun YI**, Deputy Executive Director, ANSO
10:25-10:40	**Address by the Chief Guest**
10:40-11:00	**Group Photo**
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	**Groundwater Intelligence and Water Accounting: A Regulatory Approach** by Mr. Adnan Faisal, CEO, Seyrab Water Systems, Pakistan
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	**Decoding the Clouds: AI-Powered Rainfall Prediction in the Upper Indus Basin** by Prof. Dr. Muhammad Shoaib, Professor, Bahauddin Zakaria University, Multan, 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	**AI-Enabled Geospatial Intelligence for Water Security in Arid Regions** By Prof. Alishir Kurban, Professor, Xinjiang Institute of Ecology & Geography (XIEG), Chinese Academy of Sciences (CAS), China

14:55 – 15:20	**"Smart Water Metering for Non-Revenue Water Reduction: A LoRaWAN-Based IoT Case Study of District Metered Area Projects in Johar Town, Lahore and Khayaban-e-Sir Syed, Rawalpindi, Pakistan"** by Mr. Muhammad Uzair Akhtar, Head of Products – IoT, DynaSys Networks
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**

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	**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
09:50 – 10:15	**A Multi-Temporal Approach for Soil Property Estimation Using 5-Year Sentinel-2 Time Series (Online)** by Dr. Cihangir Aydöner, 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, Distinguised Professor / Head of Office, Civil Engineering and Municipal Services, Germany
11:55 – 12:20	**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
12:20 – 12:45	**Virtual Water Manager: Orchestrating IoT and Agentic AI for Automated Quality Control** 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 – 11:45	
11:00-11:05	**Recitation from Holy Quran**
11:05-11:10	**Ambassador Dr. Mohammad Nafees Zakaria** Executive Director, COMSATS
11:10-11:15	**Prof. Dr. Raheel Qamar** Rector, COMSATS University Islamabad (CUI)
11:15-11:30	**Chief Guest:** **H.E. Dr. Shezra Mansab Ali Khan Kharal** Minister of State, Ministry of Climate Change & Environmental Coordination, Government of Pakistan
11:30-11:45	**Group Photo**
11:45 – 12:15	**Refreshments**
14:30 – 16:30	**Visit of Foreign Experts to PCRWR Laboratories**