THEMATIC SESSION 2A

Multi-Source Observation and Perception of Water Systems

14:00-15:30, 24 September 2024, Tuesday

Beijing International Convention Center, Room 201#-BC

With the development of society and technological progress, the water system observation and perception have gradually advanced from a single technical method to the direction of multi-source technology fusion. In the field of water resources management, traditional ground-based observations, as the basis for water system sensing, have been iteratively upgraded and the technology has become more mature, especially the application of acoustic, optical, radar electric wave and other technologies to become the mainstream. In the meantime, remote sensing (satellite, drone, etc.) has emerged as a powerful alternative to traditional ground-based observations, offering high-resolution and spatially comprehensive data over vast areas. This capability is exemplified by numerous space-based international hydrology satellite missions (e.g., GPM, GRACE/-FO, SMAP, SWOT, etc.) as well as recent drone application industry. This has transformed water systems, providing a window into the intricate workings of the water cycle and enabling scientists to observe and measure key hydrological variables with unprecedented accuracy and spatial coverage. This transformation has empowered us to better understand and predict water resources at local, regional, and global scales, ultimately shaping the future of water resource management in a changing climate.

SUB-THEME: Digital Transformation in Water Management

ORGANIZER(S): K-water Research Institute, K-water (Korea Water Resources Corporation); Nanjing Research Institute of Hydrology and Water Conservation Automation, Ministry of Water Resources (NIHWA)

PROGRAM

14:00-14:15	Opening	Moderator: Ran Tao
14:00-14:05	Welcome remarks and introduction of speakers	**Younghyun Cho:** Principal Researcher, K-water Research Institute, K-water

14:05-14:10	Opening address	**Zhiyu Liu:** Deputy Director, Department of Hydrology, Ministry of Water Resources
14:10-14:15	Opening address	**Callum Clench:** Executive Director, IWRA (International Water Resources Association); Director: The Cape Partnership Ltd.
14:15-14:45	**Keynote speech**	**Moderator: Ran Tao**
14:15-14:30	Cloud platform satellite imagery/model data-based water resources analysis application technology	**Younghyun Cho:** Principal Researcher, K-water Research Institute
14:30-14:45	China's operational hydrology the current situation and prospects	**Zhiyu Liu:** Deputy Director, Department of Hydrology, Ministry of Water Resources
14:45-15:25	**Speeches and discussion**	**Moderator: Younghyn Cho**
14:45-14:55	Youth Initiatives in Water Management: Action and Practices from International Forums	**Hana Ulil Azmi:** Indonesian Green Action Forum/IPB University/Asia Water Council Young Professionals
14:55-15:05	An Assist of Geospatial Cloud Computing for Water Management: A Case Study in Thailand	**Kalyanee Suwanprasert:** Plan and Policy Analyst, Senior Professional Level Research, Development and Hydrology Division, Department of Water Resources
15:05-15:15	Hydrologic features multi-perception: mutual verification & observation-physical model collaboration	**Weihua Fang:** Deputy Chief Engineer, NIHWA
15:15-15:25	Current situation and development trend of water resources monitoring and perception	**Jin Lin:** Director, NIHWA
15:25-15:30	**Conclusion**	**Moderator: Ran Tao**
15:25-15:30	Closing remarks *Session wrap-up & group photo	**Ran Tao:** Nanjing Research Institute of Hydrology and Water Conservation Automation, Ministry of Water Resources (NIHWA)

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