

IBS Conference on Global Monsoon Systems

August 10-13, 2026

Paradise Hotel Busan, Busan, Korea



DAY 1, AUGUST 10th

Time	Program / Speakers	Abstract Title
08:00 - 09:00 Registration		
09:00 - 09:10	Axel Timmermann / Kyung-Ja Ha	Welcome Remarks
Session 1: Global Monsoon system: variability and forced responses (Chair: June-Yi Lee)		
09:10 - 09:40	Bin Wang (Keynote Speaker 1)	Global Monsoon Response to External Forcing and Internal Feedback
09:40 - 09:55	Tim Li	Multi-scale Variabilities and Interactions in the Global Monsoon
09:55 - 10:10	Jonathon Wright	The Changing Asian Monsoon Overturning: Perspectives from LESFMP
10:10 - 10:25	Tao Zhou	Distinct Impacts of the Boreal Summer Asian–Australian Monsoon and Tropical Sea Surface Temperature Anomalies on the Interannual Variability of Southern Hemisphere Climate
10:25 - 10:40	Huang-Hsiung Hsu	Tropical Cyclones Enhance Climate Variability in Monsoons — An Evaluation based on TC-Removed Global Reanalysis
10:40 - 11:00 Break		
11:00 - 11:30	Fei-Fei Jin (Keynote Speaker 2)	An XRO Perspective on the Global Monsoon System's Seasonal-to-Interannual Variability and Predictability
11:30 - 11:45	Annalisa Cherchi	Global and regional monsoons in a changing climate
11:45 - 12:00	Myong-In Lee	Emerging dynamic links between Atmospheric Angular Momentum and the Asian Summer Monsoon: Implications for enhanced long-range predictability
12:00 - 13:30 Group Photo & Lunch		
Session 2: Regional monsoons: dynamics and predictability (Chair: Christian L.E. Franzke)		
13:30 - 14:00	Renhe Zhang (Keynote Speaker 1)	Interdecadal Shift in the Influence of East Asian Winter Monsoon on El Niño: The Role of the Arctic Oscillation
14:00 - 14:15	Jung-Eun Lee	Precessional Forcing and East Asian Monsoon Dynamics: Insights from Isotope-Enabled GFDL Modeling
14:15 - 14:30	Yu Liu	Recent centennial drought on the Tibetan Plateau is outstanding within the past 3500 years
14:30 - 14:45	Wan-Ling Tseng	A novel Asian Summer Monsoon Index reconstructed from mixed approach and the multidecadal variability revealed in 1400-1900s
14:45 - 15:00	Bian He	The Role of Tibetan Plateau Thermodynamic Forcing in Shaping Multi-scale Variability of the Asian Summer Monsoon from a Potential Vorticity Perspective
15:00 - 15:15	Yuanrui Chen	Interactions Between the SPCZ and Convectively Coupled Equatorial Waves
15:15 - 15:30 Break		

Session 2: Regional monsoons: dynamics and predictability (Chair: Christian L.E. Franzke)		
15:30 - 15:45	June-Yi Lee	Atmospheric Rivers and Associated Hydroclimate Extremes as an Important Component of the East Asian Monsoon System
15:45 - 16:00	Mohan Kumar Das	JetStream Evolution, Moisture Transport, and Barotropic Instability Associated with Indian Summer Monsoon Onset Variability
16:00 - 16:15	Marco Polo A. Ibanez	Assessment of a Localized Monsoon Index for Describing Monsoon–Rainfall Variability over the Philippines Using a 20-year High-resolution Gridded Rainfall Dataset
16:15 - 16:30	Ramesh Kumar Yadav	Factors influencing the north-south rainfall pattern of the Indian summer monsoon
16:30 - 18:00	Break	
18:00 - 20:00	Welcome Reception / ICCP 10th Anniversary	

DAY 2, AUGUST 11th		
Time	Program / Speakers	Abstract Title
Session 2: Regional monsoons: dynamics and predictability (Chair: Sun-Seon Lee)		
09:00 - 09:30 Jung-Eun Chu (Keynote Speaker 2)African Monsoon, Easterly Waves, and Tropical Cyclones		
09:30 - 09:45	Yung-Jen Chen	The Role of Convection–Circulation Coupling in Abrupt South Asian Monsoon Onset: Insights from SP-CAM
09:45 - 10:00	Yen-Ting Hwang	South Asian Monsoon Change as a Regional Imprint of Global Energy Redistribution: From Satellite-Era Zonal Asymmetry to Future Meridional Shifts
10:00 - 10:15	Sarthak Mohanty	Are Climate Models Getting the Australian Summer Monsoon Right for the Right Reasons?
10:15 - 10:30	Hyemi Kim	Shaping Future MJO activity through Warm Pool Modification by Climate Engineering
10:30 - 10:45 Break		
Session 3: Detection and attribution (Chair: Renhe Zhang)		
10:45 - 11:05	Jianping Li (Invited talk 1)	Rossby wave phase tracing and its application to the Pacific-Japan teleconnection pattern
11:05 - 11:25	Yukiko Imada (Invited talk 2)	Multidecadal modulation of local heavy rainfall frequency: Roles of Pacific and Indian Ocean variability
11:25- 11:45	Wenxia Zhang (Invited talk 3)	Increased extreme precipitation in North China since 2000s contributed by Inter-decadal Pacific Oscillation
11:45 - 12:00	Cheng-Ta Chen	Probabilistic event attribution for the 2025 mid-summer week-long southwesterly extreme rainfall event in southern Taiwan
12:00 - 12:15	Xiao Xiao	Soil moisture–atmosphere coupling intensifies wildfires in Siberia in 2021
12:15 - 13:30 Lunch		
13:30 - 15:00 Poster Session		
Session 3: Detection and attribution (Chair: Lin Wang)		
15:00- 15:30	Taikan Oki (Keynote speaker 1)	Pan-Asian monsoon droughts triggered by tropical volcanic eruption
15:30 - 15:45	Robert Badrina	Evaluation of Performance of Localized Southwest Monsoon Index (LSWMI) On selected 2025 Enhanced Habagat (Southwest Monsoon Events in the Philippines)
15:45 - 16:00	Xiaoyu Liu	Increasing Likelihood of the 2025 Persistent Summer Rainfall over Northern China under Anthropogenic Forcing
16:00 - 16:15	Yu Deng	Historical cold biases exaggerate future elevation-dependent warming over the Tibetan Plateau
16:15 - 16:30	Chih-Yen, Tsai	Separating Forcing-Specific Climate Signals from Internally-driven Variability with Interpretable Deep Learning Approaches: Implications for Detection and Attribution Framework
16:30 - 16:45	Xiao Lin	Network Security for Ocean Climate Data Sharing System Integrating Blockchain and Federated Learning
16:45 - 17:00 Break		
Session 4: Climate variability (Chair: Jong-Seong Kug)		
17:00 - 17:20	Wen Chen (Invited talk 1)	Recent characteristics of extreme drying and warming over the monsoon transitional zone of Northeast Asia
17:20 - 17:35	Qiufang Cai	Tree-ring 518O, a window into the summer hydroclimatic variations in the Central Water Tower of China
17:35 - 17:50	Shih-Yu Lee	Impact of Solar Activity and ENSO on the Early Summer Asian Monsoon During the Last Millennium
17:50 - 18:05	Ruijue Liu	Hydrological Mechanisms Underlying Asynchronous Changes in Atmospheric and Terrestrial Water Storage over the Songliao Region in a Warming Climate

DAY 3, AUGUST 12th		
Time	Program / Speakers	Abstract Title
Session 4: Climate variability (Chair: Yimin Liu)		
09:00 - 09:30	Johnny Chan (Keynote speaker 1)	Will the Poleward Mitigation of Tropical Cyclone Continue under Global Warming?
09:30 - 09:45	Mengzhu Diao	The Antiphase Correlation Between Tropical Cyclone Genesis in the Eastern North Pacific during July-August and the North Atlantic in October and Its Physical Mechanism
09:45 - 10:00	Daokai Xue	Future Change in the Moist Wave Activity and Its Potential Impact on Local Extreme Precipitation Under a Warming Climate
10:00 - 10:15	Dong Wan Kim	A synoptic view of the atmospheric circulation response to SST anomalies in the Kuroshio-Oyashio Extension Region: the importance of latent heating structure
10:15 - 10:30	Tao Zhu	Severe extreme cold event in Beijing-Tianjin-Hebei region tied to mid-high-latitude intraseasonal waves
10:30 - 10:45	Lin Wang	Eurasian Temperature Extremes and the Role of Waveguide Teleconnections
10:45 - 11:00 Break		
Session 4: Climate variability (Chair: Tim Li)		
11:00 - 11:20	Song Yang (Invited talk 2)	Linking the Middle East Climate Variability to the Thermal Effects in Southeast Asian and Western Pacific Regions
11:20 - 11:35	Jong-Seong Kug	Abrupt ENSO Frequency Shifts under CO ₂ Mitigation and Global Frequency Entrainment
11:35 - 11:50	Chen Sheng	Recent equatorward shift of the summer North Atlantic jet dominated by internal climate variability
11:50 - 12:05	Linjie Wang	The antagonistic effect of the North Atlantic oscillation and Eastern North Pacific on winter temperature over the North Africa Sahara
12:05 - 13:30 Lunch		
13:30 - 15:00 Poster Session		
Session 5: High-impact events and extremes (Chair: Cheng-Ta Chen)		
15:00 - 15:30	Kyung-Ja Ha (Keynote speaker 1)	Climate Extremes in the Asian Monsoon
15:30 - 15:45	Hisashi Nakamura	Interactions of Recent Summertime Atmospheric Heatwaves over Japan with Marine Heatwaves
15:45 - 16:00	Mo Chen	How to Maintain a Tropical-like Rainstorm in Midlatitudes: a Case Study of the Persistent Extreme Rainfall Event in North China, July 2023
16:00 - 16:15	Satoru Okajima	Impact of the Unprecedented East Asian Marine Heatwave of Summer 2023 on Land Heatwaves
16:15 - 16:30	Zeyu Li	Spring-Summer Caribbean Sea Marine Heatwaves Tied to Previous Winter Indian Ocean Marine Heatwaves
16:30 - 16:45 Break		
16:45 - 17:05	Sang-Wook Yeh (Invited talk 1)	Changes in atmospheric circulations over Asia and associated impact on extreme events during boreal summer
17:05 - 17:20	Anmin Duan	Compound Dry-Hot Conditions in South and Southeast Asia Modulated by the Arctic Stratospheric Polar Vortex
17:20 - 17:35	Chenwei Zhang	Change of extreme temperatures in the Three-North Region of China and its possible mechanism

DAY 4, AUGUST 13th		
Time	Program / Speakers	Abstract Title
Session 5: High-impact events and extremes (Chair: Kyung-Ja Ha)		
09:00 - 09:20	Akio Kitoh (Keynote speaker 2)	Extreme precipitation changes simulated by high-resolution global and regional climate models
09:20 - 09:35	Ramesh Kripalani	Rare Triple-dip La Nina (2020-2022) of the century, severe El Nino (2023-2024): Impact on Extreme Events
09:35 - 09:50	Seung-Ki Min	Responses of extreme fire weather to CO2 emission reductions and underlying mechanisms
09:50 - 10:05	Xueyu Bai [Naiming Yuan]	Global Teleconnections of Extreme Rainfall Events in the Yellow River Basin
10:05 - 10:20	Haozhou Liu	Heatwave Forecast Skill in the Mid-High Latitudes of the Northern Hemisphere at Subseasonal Lead Times: Regional and Duration Dispersion
10:20 - 10:35	Yanbing Zhu	Unraveling Nonlinearities in Daily-Scale SPEI Construction for Improving Extreme Drought Detection Across China
10:35 - 10:50	Break	
10:50 - 11:05	Seok-Woo Son	Local energetics of extratropical transition: A case study of typhoon Hagibis (2019)
11:05 - 11:20	Peishan Han	Interaction of Tropical Cyclones, Moisture Conveyor Belts and Atmospheric Rivers in East Asia
11:20 - 11:35	Hyunsuk Yoon	Response of Tropical Cyclone and Its Precursors to Stratospheric Aerosol Injection
11:35 - 11:50	Xinyu He	The Potential Predictability of July–August 2025 Extreme Precipitation Anomalies over Northern China from the Western Pacific and North Atlantic/Barents–Kara Sea
11:50 - 12:05	Hsin Hsu	Process-Based Attribution of Observed Evapotranspiration Changes and Their Representation in Climate Model Ensembles
12:05 - 13:30	Lunch	
Session 6: Predictability, prediction and projection (Chair: Tianjun Zhou)		
13:30 - 14:00	Keynote speaker 1 (William Boos)	Forecasting monsoon onset for millions of farmers weeks advance by combining dynamical, AI, and statistical models
14:00 - 14:15	Congwen Zhu	Subseasonal predictability of cross-time scale monsoon-tropical cyclone interaction over Asia-Pacific region
14:15 - 14:30	Andrea Alessandri	Seasonal prediction and predictability of drought
14:30 - 14:45	Fei Zhang	Predictability of interannual variations in East Asian summer rainfall under the combined influence of active monsoon and landfalling tropical cyclones
14:45 - 15:00	Alexia Karwat	Predictable cooling demand extremes under anthropogenic forcing enable multi-year adaptation planning
15:00 - 15:15	Guangcan Liu	DSDL-Based Interpretable Modeling of the Pacific Decadal Oscillation: Implications for East Asian Summer Monsoon Variability
15:15 - 15:30	Who Myung Kim	Exceptional multi-year prediction skill of the Kuroshio Extension in the CESM high-resolution decadal prediction
15:30 - 15:45	Break	

Session 6: Predictability, prediction and projection (Chair: Yong Luo)		
15:45 - 16:05	Invited talk 1 (Axel Timmermann)	Climate Change Granularity
16:05 - 16:25	Invited talk 2 (Yoo-Geun Ham)	Foundation Model Framework for Weather and Climate
16:25 - 16:40	Ke Jin	Emergent-constrained future drought changes under low to moderate emission scenarios: from CMIP5 to CMIP6 with explicit external forcings
16:40 - 16:55	Tianjun Zhou	Constrained Projection of global Monsoon Rainfall Changes
16:55 - 17:10	Michiya Hayashi	Consistency of regional and global climate projections over East Asia in CORDEX-CMIP5
17:10 - 17:25	Gopinadh Konda	Multi-fold Increases in Compound Heat, Dry, and Wet Extremes Across Asia with Rapid Growth in Population Exposure by the latter half of the 21st Century
17:25 - 17:40	Axel Timmermann	Concluding Remarks

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POSTER DAY 1, AUGUST 11th

Session	Presenters	Abstract Title
1	Suyeon Moon	Poleward Displacement of the East Asian Summer Front and Increasing Risk of Compound Extremes
1	Youngjoo Cho	Latitude-Dependent Sensitivity of Stratospheric Aerosol Injection on the future Global Monsoon
2	Yifang Xing	Statistical and Simulation Study of Low-Altitude Jets over the Qiongzhou Strait for Low-Altitude Flight Safety
2	Kiwook Kim	Explainable Seasonal Predictability of East Asian Monsoon driven by Tropical Climate Modes using Extended Recharge Oscillator
3	Qingyu Cai	The Silent Expansion of Fire Activity in Continental Tropical Asia shaped by natural and anthropogenic forces
3	Yen-Ting Chou	Attribution of Dry-Season Drying to Remote Forcings, with Regional Modulation by Local Land-Use Change over the Amazon (1980–2014), from CESM2 All-But-One Experiments
3	Eui-Seok Chung	On the causes of model-observation discrepancies in tropical troposphere warming estimates
3	Chae-Yeon Shim	Attribution and projection of 2020 summer-like hot-wet compound extremes in East Asia using large-ensemble regional climate simulations
4	Yang Ke	Reconstruction of the Net Land Surface Energy Flux Constrained by the Energy Conservation and Land Surface Model Simulations
4	Anqi Liu	Historical diurnal temperature range trends constrain future climate projections
4	Rong Yang	Impact of SST anomalies in the Western Pacific Warm Pool core area on the East Asian Summer Monsoon variability and its mechanism
4	Jaeyeong Lee	Decoupling between Lower-Tropospheric and Surface Winds in the Pacific Weakens ENSO Variability under Global Warming
4	Chi-Cherng Hong	Strengthened Connections of Pakistan Heavy Rainfall with the Tropical–Extratropical Linkage and Southeastern China Heatwaves Since the Early 2000s
4	Jingnan Yin	istinct Eurasian Teleconnection Wave Trains Contributing to the Intraseasonal Variations of East Asian Jet Streams
4	Kourosh Haddadi Moghaddam	Strategic approaches for enhancing climate change adaptation of species in Caspian Sea
4	Kourosh Haddadi Moghaddam	El Ninos and its role on the global carbon cycle in the Caspian Sea
4	Lan Dai	Water vapor impacts from the 2022 Hunga eruption on Eurasian surface climate
4	Hanzhao Yu	Reduced Asian monsoon influence on Mediterranean summers in a warmer climate
4	Chang Huang	Diverse Impacts of La Niña on Asian Monsoon Precipitation: The Dominant Role of ENSO Evolutionary Pathways
4	Christian Franzke	Forced response and internal variability changes in the hydrological cycle and general circulation in a hot world beyond 2100
4	CONSTANCE UWIZEWE	Investigation of the Historical Trends and Variability of Rainfall Patterns during the March–May Season in Rwanda.
4	Mengqi Cheng	Diverse Combined Land-atmosphere Dryness Changes Following Deforestation in the Northern Hemisphere
4	Min-Hui Lo	Forests Buffer ENSO-Driven Evapotranspiration Variability in the Maritime Continent
4	NHUT CONG MAI	Utility-scale photovoltaic solar farms under the East Asian monsoon: an observation-to-mesoscale study over humid subtropical Taiwan

4	TIANJIAO MA	Wintertime East Asian temperature variability on subseasonal scale: its connection to North America and the associated dynamical processes
4	Ting-Hui Lee	Mean-State Dependence of Deforestation-Induced Precipitation Changes in the Maritime Continent
5	Yi Yang	Regime shifts shape compound drought-heatwave risks
5	Rong-Cih Chang	Recent Pre-Monsoon Warming and Hydroclimatic Changes over Southeast Asia: Land–Atmosphere Feedbacks and Possible Circulation Links
5	Chao-An Chen	Examining Changes in Typhoons Affecting Taiwan Under Global Warming Based on a Pseudo-global Warming Approach
5	Ji-Hye Yeo	Dual Regimes of North American Heatwaves and Their Future Change
5	Hye-Ryeom Kim	Recent asymmetric tropical ocean warming has altered regional propagation of Madden-Julian Oscillation

POSTER DAY 2, AUGUST 12th

Session	Presenters	Abstract Title
5	Hsin-Chien Liang	Evaluation of nextGEMS Simulation of Monsoon and Tropical Cyclones in the Western North Pacific
5	Shaobo Qiao	Distinct response of Asian summer monsoon rainfall during the first and third years of triple-dip La Niña events
5	Danqing Huang	Synchronized Heat Extremes in the Northern Hemisphere Based on a Complex Network
5	Sanjit Kumar Mondal	Warming reorganizes compound drought–fire extremes pathways
5	Daeun Kwon	Responses of Extreme Precipitation to Future Warming over the Korean - Using Pseudo-Global Warming Experiment
5	Tingyu Zhang	Increased shallower tropical cyclones under extreme warm climates
5	Cheng-Ta Chen	Increasing frequency, maximum spatial extent, total water volume, and extreme local intensity of torrential rainfall events in Japan
5	Undrakh Ganzorig	Cleaner Air and Increasing Warm-Season Heat in Taiwan
5	Yimin Liu	Synchronization and Mechanisms of Extreme Heatwaves in the Northern Hemisphere
5	Jinling Piao	An abrupt and persistent climate regime shift in the Western Eurasian Steppe
5	Xu Nuo	Regional inhomogeneous responses of East Asian surface air temperature to multi-scale Asian topography thermodynamical forcing during boreal winter
5	Pradeep Kumar Rai	Aerosol-Cloud Interactions and Their Influence on Indian Monsoon Wet and Dry Extremes
5	Md. Babul Miah	Irreversibility of extreme precipitation intensity in global monsoon areas under multiple carbon neutrality scenarios
5	Tang Bin	Unequal economic impacts of climate change via idealized carbon dioxide removal: insights from deep learning
5	Bello Ahmad Abdullahi	Extreme rainfall in the southern Niger-northern Nigeria Sahel: recent trends and synoptic drivers
6	Abhinav Rajalakshmi Subrahmanian	The role of ocean dynamics and initial ocean memory on multi-year prediction of the North Atlantic Climate variability
6	Vy Truong (Hien Bui)	Changes in the Madden-Julian Oscillation: From Climate Change to Climate Intervention
6	Suguo Zhang	Geography-aware deep learning downscaling of Net Effective Temperature for future heat-stress projection in East Asia
6	Arya Vazhaparambil Sasi	Deep-learning-based Prediction of Tropical Intraseasonal Oscillations and Associated Heatwaves.
6	Danwei Qian	Optimized decadal prediction of summer precipitation over eastern China
6	Beomhee Jo	Projected Changes in Wind Speed and Wind Power Potential using a km-scale Earth System Model
6	Jingsong Gao	Evaluation and Correction of FY-4B/AGRI Satellite Data and Their Application to Short-Term Photovoltaic Power Forecasting
6	Dianhewen Liu	TDSwin-UnetSS: A Physics-Informed Hybrid Transformer for Unified Multi-Lead Subseasonal Maritime Wind Forecasting
6	Hirokazu Endo	Eurasian continental warming as a source of uncertainty in future projections of East Asian summer monsoon precipitation
6	Tahir Alaka	Empirical Prediction of Daily Climate Time Series Data Using Long Short-Term Memory (LSTM)
6	Junghee Yun	Seasonal SST Predictability in the East Asian Marginal Seas Using a Season-Reliant EOF Analysis
6	Jian Zhu	Comparative Characteristics and Physical Mechanisms of Flash Droughts and Slow-Onset Droughts
6	Mincheol Moon	Uneven tropical cyclone responses to policy-relevant stratospheric aerosol injection

6	Yong Luo	Distribution-Guided Ensemble Postprocessing for S2SPrecipitation Forecasts: A Seamless Pathway Using Deep Generative Models
6	Jeongeun Yun	Exploring ocean-driven multi-year predictability of wildfires
6	Manuel Tobias Blau	Snow Cover Loss Reshapes Climate Dynamics over High Mountain Asia
