

**Evolution of the Asian
Monsoon and its
Impact on Landscape,
Environment and
Society:
Using the Past as the
Key to the Future**

Conveners

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Louisiana State University, USA

Gabriel Ngar-Cheung Lau

Chinese University of Hong Kong, China

Dorian Q. Fuller

University College London, U.K.

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Dehra Dun and Indian Institute of
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Barry V. Rolett

University of Hawaii at Manoa, USA

Program Committee

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Chinese Academy of Sciences, Qingdao,
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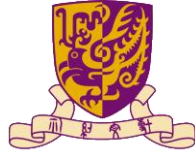
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Science,
CUHK

AGU Chapman Conference
**“Evolution of the Asian Monsoon and its Impact on Landscape, Environment and Society:
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Conference Programme

14 June 2015 (Sunday)	
Venue: Staff Common Room Clubhouse, G/F, Pentecostal Mission Hall Complex (High Block), CUHK	
17:30 - 19:30	Welcome Dinner

15 June 2015 (Monday)	
Venue: Lecture Theatre (LT7), 2/F, Yasumoto International Academic Park, CUHK	

8:00 - 8:30	Registration
8:30 - 9:00	Opening Ceremony

Session 1. Centennial and millennial scale variability in intensity of the Asian monsoon in the late Quaternary and Holocene	
Session Chairs: Ryuji Tada, Mahyar Mohtadi	

9:00 - 9:45	Keynote Address Asian Monsoon Variability over the Past Millennium Reconstructed from Long Tree-Ring Records: the Monsoon Asia Drought Atlas, version 2 (MADAv2) Edward R Cook
9:45 - 10:00	Late Holocene Monsoon Variability over Indian Peninsula as inferred from Palaeoflood Records Vishwas Kale
10:00 - 10:15	Late Quaternary Asian Monsoon Dynamics Recorded in Tibetan Lake Systems by Compound-Specific Isotopes of Terrestrial and Aquatic Biomarkers Franziska Günther
10:15 - 10:30	A Model-Data Assessment of Glacial to Holocene Changes in Walker and Hadley Circulations: Implications for Indian Ocean Hydroclimate and Wind System Mahyar Mohtadi
10:30 - 10:45	Dynamics Of The Intertropical Convergence Zone Over The Western Pacific During The Little Ice Age Hong Yan
10:45 - 11:15	Coffee Break Poster Presentation
11:15 - 11:30	Controls of silicate weathering in Taiwan Island: transport-limited or weather limited? Shouye Yang
11:30 - 11:45	Millennial-scale Shifts in Summer Monsoon Front Position in East Asia during the late Holocene deduced from Provenance Changes of the Yangtze River Suspended Particulate Matter Ryuji Tada
11:45 - 12:00	Multi-decadal to centennial-scale variability in Australian-Indonesian monsoon intensity over the past two millennia Stephan Steinke
12:00 - 12:15	Vegetation Response to the Subtropical Climate Changes before and during the Last Glacial Period in South China Yuanfu Yue
12:15 - 12:30	Discussion
12:30 - 14:00	Lunch

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15 June 2015 (Monday)	
Session 2. Impacts of climate change on environment in Asia. How do rivers and landscape respond to changing rainfall?	
Venue: LT7, Yasumoto International Academic Park, CUHK	
Session Chairs: Shiming Wan, Stephan Steinke	
14:00 - 14:15	Enhanced silicate weathering fluxes from tropical shelf sediments exposed during glacial lowstands Shiming Wan
14:15 - 14:30	Anthropogenic Impacts on Landscape in River Basins of SE and East Asia Peter Dominic Clift
14:30 - 14:45	Investigating the main driving factors in the Holocene evolution of Qing’ao Embayment, Nan’ao Island, southern China Adam Switzer
14:45 - 15:00	Cyclone-Driven Sediment Loads on the Lower Mekong River: Does the Monsoonal Flood Pulse Matter? Stephen E Darby
15:00 - 15:15	Precipitation and Extreme Heat Projection in Eastern China under CMIP5 Scenarios: the Statistical Downscaling Results Yimin Liu
15:15 - 15:30	Modelling the Impact of the Spread of Wet Rice Cultivation on Atmospheric Methane Levels from Archaeobotanical Data Fabio Silva
15:30 - 16:15	Coffee Break Poster Presentation
16:15 - 17:00	Keynote Address Security Implications of Changes in the Asian Monsoon Jon R Barnett
17:00 - 17:15	Reconstruction of Erosion-Weathering-Vegetation Interactions during the Holocene in subtropical Taiwan Selvaraj Kandasamy
17:15 - 17:30	Monsoon Asia as a Key Region for Future Earth Tetsuzo Yasunari
17:30 - 17:45	Gathering cross-cultural knowledge of Monsoon Asia's 'diverse economy' Lisa Law
17:45 - 18:00	Discussion

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16 June 2015 (Tuesday)	
Session 3a. Observation and modeling of monsoon variability and change	
Venue: LT7, Yasumoto International Academic Park, CUHK	
Session Chairs: Bin Wang, William K-M Lau	
8:30 - 9:15	Keynote Address Impacts of the Tibetan and Iranian Plateau on the Onset, Evolution and Maintenance of Asian Summer monsoon Guo-Xiong Wu
9:15 - 9:30	Multi-Decadal Modulations Observed in the Variability of the East Asian Summer Monsoon Hisashi Nakamura
9:30 - 9:45	Contrasting influences of ENSO on the East Asian monsoon during different PDO phases Lin Wang
9:45 - 10:00	How does the East Asian Summer Monsoon Behave in the Decaying Phase of El Niño during Different PDO Phases? Juan Feng
10:00 - 10:15	Large-Scale Features Associated with the Long-Term Changes in the Asian Monsoon and ENSO Song Yang
10:15 - 11:00	Coffee Break Poster Presentation
11:00 - 11:15	Rethinking Indian monsoon rainfall prediction in the context of the recent global warming Bin Wang
11:15 - 11:30	Trends and Multi-decadal Variability in the Hydroclimate of Northern India and Tibet as Manifested in Paleoclimate, Precipitation and Reanalysis Data 1850-2010 Kent Moore
11:30 - 11:45	Spacebased Observation of the Hydrological Balance Related to the Indian Monsoon W. Timothy Liu
11:45 - 12:00	Multiscale control of summertime persistent heavy precipitation events over South China in association with synoptic, intraseasonal, and low-frequency background Wen Zhou
12:00 - 12:15	Observed Relationship of Boreal Winter South Pacific Tripole SSTA with Eastern China Rainfall during the Following Boreal Spring Xin Wang
12:15 - 12:30	Discussion
12:30 - 14:00	Lunch

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16 June 2015 (Tuesday)	
Session 3b. Observation and modeling of monsoon variability and change	
Venue: LT7, Yasumoto International Academic Park, CUHK	
Session Chairs: Bin Wang, William K-M Lau	
14:00 - 14:45	Keynote Address Intraseasonal Variability of the Asian Summer Monsoon John M. Wallace
14:45 - 15:00	Effect of the representation of mountains on the Asian monsoon in a global warming world Akio Kitoh
15:00 - 15:15	Climatology and Interannual Variability of East Asian-Western Pacific Summer Monsoon Simulated by CMIP5 Models Tianjun Zhou
15:15 - 15:30	Toward a mesoscale hydrological and marine meteorological observation network in the South China Sea Dongxiao Wang
15:30 - 15:45	The Indian Summer Monsoon Onset Related to the Seasonal Timing of Stratospheric Final Warming Events Rongcai Ren
15:45 - 16:30	Coffee Break Poster Presentation
16:30 - 16:45	The Aerosol-Monsoon Climate System of Asia William K-M Lau
16:45 - 17:00	Particulate Pollution and Daily Surface Rainfall: Observational Study over Indian Summer Monsoon Region Sachchida Nand Tripathi
17:00 - 17:15	Weather Types across the Maritime Continent: from the Diurnal Cycle to Interannual Variations Jian-Hua Qian
17:15 - 17:30	A Multi-model Evaluation of Aerosols over South Asia: Common Problems and Possible Causes Xiaohua Pan
17:30 - 18:00	Discussion

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17 June 2015 (Wednesday)	
Session 3c. Observation and modeling of monsoon variability and change	
Venue: LT7, Yasumoto International Academic Park, CUHK	
Session Chairs: William K-M Lau, Song Yang	
8:30 - 8:45	The West African Monsoon: From a better understanding of the intraseasonal and synoptic variability toward forecast Jean-Philippe Lafore
8:45 - 9:00	An Analysis if the 2012 Southwest Monsoon Surge in the Philippines Lea L. Dasallas
9:00 - 9:15	Influences of ENSO on the Vertical Coupling of Atmospheric Circulation during the Onset of South Asian Summer Monsoon Boqi Liu
9:15 - 9:30	Can the Tropical Storms Originated from the Bay of Bengal Impact the Precipitation and Soil Moisture over the Tibetan Plateau? Zhixiang Xiao
9:30 - 9:45	The Influence of Decadal-scale Variations of East Asian Monsoon on Taiwan’s Extreme Dry Spells Mong-ming Lu
9:45 - 10:00	A New Indicator of Cold Air Outbreak Events: Intensity Variations of the Meridional Mass Circulation Yueyue Yu
10:00 - 10:15	Break
Session 4. Field trip to Geo Park and Cocktail Reception at Maritime Museum	
Venue: Geo Park, Hong Kong Maritime Museum	
Session Chairs: Jason Ali, Chiu Hon Chim	
10:15 - 18:15	Field Trip Depart CUHK to Sai Kung Pier Field visit Lunch Field visit Depart Geo Park to Maritime Museum
18:15 - 20:00	Cocktail Reception

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18 June 2015 (Thursday)	
Session 5. Settlement of Asia and historical interactions between humans and monsoon	
Venue: LT7, Yasumoto International Academic Park, CUHK (unless otherwise specified)	
Session Chairs: Barry Rolett, Li Liu	
8:30 - 9:15	Keynote Address Interacting Drivers of Holocene Vegetation Change in the Lower Yangtze River, China David Taylor
9:15 - 9:30	Modelling the spread of Agriculture across East Asia: Insights on the Spread of Agriculture to the Tibetan Plateau Jade d'Alpoim Guedes
9:30 - 9:45	Climate change, subsistence shortage, and population checks in late imperial China Harry F. Lee
9:45 - 10:00	Mid to Late Holocene climate and sea level changes and its relation to culture in Japan Yusuke Yokoyama
10:00 - 10:15	Mid-Holocene Climate Change vs. Anthropogenic Influence in the Evolution of Southeast China Forest Landscapes Zhuo Zheng
10:15 - 11:00	Coffee Break Poster Presentation
11:00 - 11:15	Monsoon variability and the decline of Angkor: A modeling study of human responses to environmental change Jed O Kaplan
11:15 - 11:30	The seasonal predictability of East Asian Summer monsoon Bo Huang
11:30 - 11:45	Plant-Use Patterns in the Central Plain and the Northern Zone of China during the Early and Middle Holocene Li Liu
11:45 - 12:00	Catastrophic Flooding and Societal Vulnerability during the Neolithic on the East China Coast Zhanghua Wang
12:00 - 12:15	Discussion
12:15 - 14:00	Lunch
14:00 - 14:45	Visit to Jockey Club Museum of Climate Change Venue: 8/F, Yasumoto International Academic Park, CUHK
Session 6. Summary of major recent findings	
Venue: as specified below	
Session Chairs: Peter Dominic Clift, Bin Wang and William K-M Lau	
14:45 - 15:45	Break-out groups synthesis Venue: Session 3 LT7, Yasumoto International Academic Park, CUHK Session 2 901, 9/F, Yasumoto International Academic Park, CUHK Sessions 1 and 5 905, 9/F, Yasumoto International Academic Park, CUHK
15:45 - 16:15	Coffee Break Venue: LT7, Yasumoto International Academic Park, CUHK
16:15 - 18:00	Joint presentation and discussion Venue: LT7, Yasumoto International Academic Park, CUHK
18:00 - 20:30	Conference Dinner Venue: Chung Chi College Staff Canteen, CUHK

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List of Posters	
Venue: Foyer, 2/F, Yasumoto International Academic Park, CUHK	
No. 1	The impact of Mixed Rossby-Gravity waves on the interannual variation of tropical cyclones over western North Pacific Andie Y. M. Au-Yeung
No. 2	Southeast China Rainfall Variability and its Relationship with the Large-Scale Circulation Over the Indo-Pacific Region and East Asia Chi-shing Calvin Cheung
No. 3	Observed and Simulated Linkage between Ural Blocking and East Asian Winter Climate Ho Nam Cheung
No. 4	Seasonal Variability of Sea Surface Temperature (SST) and Chlorophyll Distribution during Southeast (SE) Monsoon in Indonesian Waters W.Samad Daming Jr.
No. 5	Variation of the North Pacific Trough and Its Links with the Asian-Pacific-American Summer Climate Anomalies Kaigiang Deng
No. 6	Extreme Rainfall Events in Asia: Projected Changes and Uncertainties Nicolas Freychet
No. 7	Terrigenous supplies variability over the past 22 000 yr in the southern South China Sea slope: relation to sea level and monsoon rainfall changes Jie Huang
No. 8	Holocene Vegetation Changes and Human Activities Revealed by a Peat Sediment Core in Gaoyao, Zhaoqin Peng Huanhuan
No. 9	Variations in South Asian Monsoon over the last 13 kyr inferred from biogeochemical properties of maar sediment in the central highland of Vietnam Hiroyuki Kitagawa
No. 10	Analysis of the West African monsoon annual cycle using a two-dimensional model: Some key factors contributing to the rainband displacement Jean-Philippe Lafore
No. 11	The present and future of the West African monsoon: a process-oriented assessment of CMIP5 simulations along the AMMA transect Jean-Philippe Lafore
No. 12	Variation of Circulation and East Asian Climate Associated with Anomalous Strength and Displacement of the East Asian Trough Yu Ting Leung
No. 13	Climatic Characteristics of Abrupt Change on Tropical Cyclone Number in the Mid-1990s over the North Western Pacific Delin Li
No. 14	Response of the Winter Moisture Circulation to the India-Burma Trough and Its Modulation by the South Asian Waveguide Xiuzhen Li
No. 15	Feedback Attributions to the Interannual Variation of the Dominant Modes of the East Asian Winter Monsoon Yana Li

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List of Posters (Con't)	
Venue: Foyer, 2/F, Yasumoto International Academic Park, CUHK	
No. 16	Three Eurasian teleconnection patterns: spatial structures, temporal variability, and associated winter climate anomalies Yuyun Liu
No. 17	Synoptic Characteristics of Heat Waves over the Indochina Ming Luo
No. 18	Winter time Changes in the Strength of Tropical Circulation and its Impact on Tropospheric Ozone over Pacific under Global Warming Scenario Debashis Nath
No. 19	Agricultural Drought and Food Security in India: Role of Indian Summer Monsoon Reshmita Nath
No. 20	Multi-scale Variability of Rainfall in China Shuang Qiu
No. 21	Intraseasonal Variation of the Strength of the East Asian Trough and its Climatic Impacts in Boreal Winter Lei Song
No. 22	Aerosol Impacts on Precipitation over China During the East Asian Summer Monsoon Hui Su
No. 23	The leading correlation of the winter Aleutian Low with surface air temperature during the subsequent summer over the Arctic and its possible mechanism Fuan Xiao
No. 24	Projections of the Walker circulation and Asian monsoon rainfall variability related to two types of ENSO in the 21st century Kang Xu
No. 25	Anomalous tropical cyclone activity in the northwestern Pacific in 2014 Lei Yang
No. 26	Influences of spring-to-summer SSTs over different Indian Ocean regions on the Asian summer monsoon: A numerical study Song Yang
No. 27	ITCZ and ENSO pacing on East Asian winter monsoon variation during the Holocene, Sedimentological evidence from the Okinawa Trough Xufeng Zheng