

# CLIVAR Workshop on Interaction among the tropical basins: observations and simulations

**Date:** June 22-23, 2024

**Venue:** Science Building B102, Yonsei University, Seoul, South Korea

**Workshop URL:** <https://www.clivar.org/events/workshop-interaction-among-tropical-basins-observations-and-simulation>

## Workshop Schedule

### June 22

<b>Session 1: Climate model simulations</b> Moderators: Soon-Il An, Malte Stuecker  <b>Meeting link:</b> <a href="https://meet.goto.com/111381365">https://meet.goto.com/111381365</a>	
9:00	Workshop introduction <i>Ingo Richter, JAMSTEC</i>
9:10	Enhanced joint impact of western hemispheric precursors increases extreme El Niño frequency under greenhouse warming <i>Hyun-Su Jo, Seoul National University</i>
9:25	Indo-Atlantic booster for super El Niño: A pacemaker experiment study <i>Chunzai Wang, South China Sea Institute of Oceanology</i>
9:40	Exploring the influence of ENSO on Indian Ocean variability and implications for Australian climate <i>Andrea Taschetto, University of New South Wales</i>
9:55	Understanding the weakening of the in-phase relationship of the PDO-IOBM during the boreal winter <i>Sang-Wook Yeh, Hanyang University</i>
10:10	Pacemaker experiment on ENSO/IOD-Australian rainfall teleconnection <i>Ying-Lung Liu, University of New South Wales</i>
10:25	<b>Coffee break</b>
10:55	Unraveling the global teleconnections of Indian summer monsoon clouds: expedition from CMIP5 to CMIP6 <i>Ushnanshu Dutta, National Taiwan University</i>
11:10	Synchronous Decadal Climate Variability in the Tropical Central Pacific and Tropical South Atlantic <i>Chao Liu, Yonsei University</i>
11:25	Seasonal predictability led by tropical Atlantic SST forcing

	<i>Ji-Gwang Kim, Chonnam National University</i>
11:40	Weakening of tropical Atlantic - Pacific interactions post 2000 <i>Noel Keenlyside, University of Bergen</i>
11:55	Ocean's role in modulating large-scale tropical atmospheric circulations in a warming climate ( <b>online</b> ) <i>Antony Thomas/Wei Liu, University of California, Riverside</i>
12:10	Tropical dynamics makes earth system predictable in multi-year time scale <i>Yong-Yub Kim, IBS Center for Climate Physics</i>
12:25	<b>Lunch break</b>
14:00	Estimating Contributions of External Forcings and Ocean Processes to the Long-term Predictability of Atlantic Multidecadal Variability <i>R. S. Abhinav, IBS Center for Climate Physics</i>
14:15	Estimating Predictability of Tropical Trans-basin Climate Variability using the CESM2-based Multi-year Prediction System <i>June-Yi Lee, Pusan National University</i>
14:30	Covariabilities of tropical Sea Surface Temperatures and Precipitation in CMIP6 historical and SSP-585 <i>Isabelle Vilela, Federal University of Pernambuco</i>
14:45	The Tropical Pacific SST pattern problem ( <b>invited</b> ) <i>Masahiro Watanabe, University of Tokyo</i>
15:05	Extratropical versus inter-basin influence on the recent Walker circulation strengthening <i>Yu Kosaka, University of Tokyo</i>
15:20	Discovery of a New Inter-Basin Climate Pattern: Australia Boundary Current Dipole <i>Jianping Li, Ocean University of China</i>
<p><b>Session 2: Conceptual and theoretical models</b> Moderators: Ingo Richter, Chunzai Wang</p> <p><b>Meeting link:</b> <a href="https://meet.goto.com/196683141">https://meet.goto.com/196683141</a></p>	
15:35	Explainable El Niño predictability from climate mode interactions <i>Malte Stuecker, University of Hawaii at Manoa</i>
15:50	A study on impacts of interbasin coupling strength on climate modes in the tropical Indian and Pacific Oceans using linear inverse models <i>Ziyu Ye, University of Tokyo</i>
16:05	Emulating GCM pacemaker experiments using linear inverse models

	<i>Ingo Richter, Japan Agency for Marine-Earth Science and Technology</i>
16:20	<b>Coffee break</b>
16:50	Causal effects of Indian Ocean Dipole on El Niño-Southern Oscillation during 1950-2014 based on high-resolution models and reanalysis data ( <b>invited</b> ) <i>Thanh Le, Nanjing University of Information Science and Technology</i>
17:05	Decadal modulation of ENSO and IOD impacts on the Indian Ocean Upwelling <i>Xiaolin Zhang, Dalian Maritime University</i>
17:20	6 flash talks (5 min each)
	Understanding the Tropical Pacific Decadal Variability through a Southern Hemisphere Climate Mode ( <b>online</b> ) <i>Shikhar Srivastava, Indian Institute of Science, Bengaluru</i>
	Sub-surface observations of water temperature from animal-borne sensors can provide essential information for understanding tropical cyclone behaviour and intensity ( <b>online</b> ) <i>Clive McMahon, Sydney Institute of Marine Science</i>
	Assessing the Added Value of the Regional Earth System Model over Forcing CMIP6 Model for CORDEX-South Asia: A Focus on the Tropical Indian Ocean ( <b>online</b> ) <i>Pankaj Kumar, Indian Institute of Science Education and Research Bhopal</i>
	Large-scale Anomalous Cyclone in the Western North Pacific <i>Haili Wang, South China Sea Institute of Oceanology</i>
	Predicting the 2023/24 El Niño from a multi-scale and global perspective <i>Tao Lian, Second Institute of Oceanography</i>
17:45	Role of Indian Ocean precipitation anomalies in early winter ENSO and IOD teleconnection to the South Asian and North Atlantic regions <i>Fred Kucharski, Abdus Salam ICTP</i>
18:00	Wrap-up discussion day 1
19:00	Workshop dinner

**June 23**

**Session 3: Observations**

Moderators: Noel Keenlyside, Jong-Seong Kug

**Meeting link:** <https://meet.goto.com/498383989>

9:00	Toward a more integrated pantropical observing system ( <i>invited</i> ) ( <b>online</b> ) <i>Greg Foltz, NOAA/AOML</i>
9:20	Roles of Pacific-Atlantic Interactions in the Multi-Year Dynamics of North Pacific Marine Heatwave <i>Jin-Yi Yu, University of California, Irvine</i>
9:35	Unraveling the Indian Monsoon's Role in Fueling the Unprecedented 2022 Marine Heatwave in the Western North Pacific <i>Qianghua Song, South China Sea Institute of Oceanology</i>
9:50	Heat exchange for exceptional climate conditions in 2023 <i>Shoshiro Minobe, Hokkaido University</i>
10:05	Influences of Central and Eastern Atlantic Niño on the West African and South American Summer Monsoons <i>Wen Xing, South China Sea Institute of Oceanology</i>
10:20	<b>Coffee break</b>
10:50	Formation Mechanisms for Central and Eastern Atlantic Niño <i>Lei Zhang, South China Sea Institute of Oceanology</i>
11:05	Distinct decadal modulation of Atlantic-Niño influence on ENSO <i>Jae-Heung Park, Seoul National University</i>
11:20	Two Distinct temporal Evolutions of La Nina and their teleconnections with the north Indian Ocean and Indian Summer Monsoon Rainfall <i>Tanu Sharma, India Meteorological Department, Pune</i>
11:35	The strengthened role of north Atlantic SST as predictor of Indian summer monsoon rainfall and Indian Ocean Dipole in the recent period ( <b>online</b> ) <i>Appukkuttan Pillai Prasanth, Indian Institute of Tropical Meteorology</i>
11:50	Wrap-up discussion day 2 <i>inc. a presentation by Ping Chang on "TBI MIP: Preliminary Results from CESM2 Tropical Basin Pacemaker Hindcasts"</i> (may be presented at 13:30 for TBI RF meeting)
12:20	Closing remarks <i>Ingo Richter, JAMSTEC</i>
12:30	Adjourn Workshop

### **RF TBI Business**

13:30-15:00	Discuss organizational matters, including status of TBI experiments and potential for a review paper
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