

Mathematics and Artificial Intelligence for Weather and Climate

(02 Nov 2026–13 Nov 2026)



ORGANIZING COMMITTEE

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Gianmarco Mengaldo

National University of Singapore

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Venue

IMS Executive Seminar Room

Bock S17, Level 3

10 Lower Kent Ridge Rd Singapore 119076

Mathematics and Artificial Intelligence for Weather and Climate

(Week one: 02–06 November 2026)

Monday, 02 November 2026

Time	Title	Speaker
0930–1030	Arrival, Registration and Networking	
1030–1100	Opening Ceremony	
1100–1200	Global Warming & Global Weirding: A Nonautonomous Dynamical Systems Perspective	Michael Ghil <i>UCLA, USA</i>
1200–1400	Lunch Break	
1400–1500	Critical Transitions in Complex Dynamical Systems: Theory and Applications to Ecosystems and Climate	Ulrike Feudel <i>University of Oldenburg, Germany</i>
1500–1515	Tea Break	
1515–1615	Analysis of a Two-Layer Diffusive Energy Balance Model	Cristina Urbani <i>Universitas Mercatorum, Italy</i>

Tuesday, 03 November 2026

Time	Title	Speaker
0915–0930	Registration	
0930–1030		Simon See <i>NVIDIA AI Technology Center, Singapore</i>
1030–1110	Group Photo & Tea Break	
1110–1140	Learning a Recurrence-based Latent Space of North Atlantic-European Weather Regimes with Joint Embedding Predictive Architectures	Marco Zanchi <i>CNRS, France</i>
1140–1210		Yuxuan Yang <i>NUS, Singapore</i>
1210–1400	Lunch Break	
1400–1500	How Surprising are Rare Climate Extremes?	Melinda Galfi <i>VU Amsterdam, Netherlands</i>
1500–1515	Tea Break	
1515–1615		Juan-Pablo Ortega <i>NTU, Singapore</i>

Wednesday, 04 November 2026		
Time	Title	Speaker
0915–0930	Registration	
0930–1030		Dale Barker <i>Centre for Climate Research Singapore, Singapore</i>
1030–1100	Tea Break	
1100–1130		Chenyu Dong <i>NUS, Singapore</i>
1130–1200		Emma Andrews <i>NUS, Singapore</i>
1200–1400	Lunch Break	
1400–1500	Complexity science and AI Methods for Earth System Tipping Points	Jingfang Fan <i>Beijing Normal University, China</i>
1500–1515	Tea Break	
1515–1615	Statistics of Open Systems and Metastability	Sandro Vaienti <i>CNRS, France</i>
Thursday, 05 November 2026		
Time	Title	Speaker
0915–0930	Registration	
0930–1030	Understanding Predictability, Physical and Dynamical Processes to inform Data-driven Weather and Climate Prediction Models R&D	Gilbert Brunet <i>ECCC, Canada</i>
1030–1100	Tea Break	
1100–1200	Thermodynamically Consistent Modeling of Geophysical Fluids: A Variational Perspective	François Gay-Balmaz <i>NTU, Singapore</i>
1200–1400	Lunch Break	
1400–1500	In-Context Operator Networks (ICON): A Research Program for Numerical Intelligence	Yang Liu <i>NUS, Singapore</i>
1500–1515	Tea Break	
1515–1615		Qianxiao Li <i>NUS, Singapore</i>
1615–1630	Tea Break	
1630–1730	Persistent Anticyclones, AI and Quantum Computing: Why We Need a 'CERN for Climate Change' <i>Talk is delivered virtually.</i>	Tim Palmer <i>University of Oxford, UK</i>

Friday, 06 November 2026		
Time	Title	Speaker
0915–0930	Registration	
0930–1030		Gianmarco Mengaldo <i>NUS, Singapore</i>
1030–1100	Tea Break	
1100–1200	Tracing Uncertainties of Extreme El Niño Prediction to Mesoscale Ocean Currents	Bo Qin <i>Tongji University, China</i>

This schedule is accurate as of 16 Oct 2026 and is subjected to changes.