

## Joint ASEAN-Africa Workshop on Computational and Applied Mathematics

(13 Apr 2026–17 Apr 2026)

### List of Speakers and Talks' Title

Name and Affiliation	Talk Title
Sara Abdelsalam The British University in Egypt, Egypt	Mathematics at the Core of Applied Research: Where Theory Meets Practice
Shakir Ali Aligarh Muslim University, India	Algebraic Tools for Coding Theory and Cryptography
Abdon Atangana University of the Free State, South Africa	The Unfinished Equation: Why our Mathematics has Failed Nature
Ratinan Boonklurb Chulalongkorn University, Thailand	Chebyshev Finite Integration Method for Solving Heat Conduction with Nonlocal and Moving Boundaries
Yanping Chen Nanjing University of Posts and Telecommunications College of Science, China	A Priori and a Posteriori Error analyses of a Pressure-robust Virtual Element Method for the two-Dimensional Brinkman problem
Hong Chu Vin University, Vietnam	Concave Certificates: Geometric Framework for Distributionally Robust Risk and Complexity Analysis
Dinh Nho Hào Vietnam Academy of Science and Technology, Vietnam	Identification of some Water Quality Models
Mamadou Abdoul Diop Université Gaston Berger de Saint Louis, Senegal	Approximate Controllability for some Integrodifferential Equations
Yue Feng Xi'an Jiaotong University, China	Explicit Symmetric Low-Regularity Integrator for the Nonlinear Schrodinger Equation
Yunqing Huang Xiangtan University, China	Rank Inspired Neural Network for Solving PDEs
Editha Jose University of the Philippines Los Baños, Philippines	Transmission Dynamics of Soil-Transmitted Helminths Incorporating Human and Animal Hosts
Kenji Kajiwara Kyushu University, Japan	Generation of Aesthetic Curves: Integrability and Self-Affinity

Name and Affiliation	Talk Title
Phan Quoc Khanh Ton Duc Thang University, Vietnam	Directional Variational Convergence, Directional Equilibrium Problems
Bernd Krauskopf The University of Auckland, New Zealand	Excitability and Feedback: to Pulse or not to Pulse?
Angelyn Lao De La Salle University, Philippines	Reaction Networks Approach of Modeling Biological and Disease Dynamics
Chang-Ock Lee Korea Advanced Institute of Science & Technology, South Korea	Hybrid Least Squares/Gradient Descent Methods for DeepONets
Qianxiao Li National University of Singapore, Singapore	Learning Macroscopic Dynamics from Data
Shuigen Liu National University of Singapore, Singapore	Exploiting Locality Structure in High-Dimensional Diffusion Models
Xin Liu Chinese Academy of Sciences, China	Stability and Adaptive Enhancement of SPRING in Wavefunction Optimization
Ikha Magdalena Institut Teknologi Bandung, Indonesia	Quantifying the Effectiveness of Mangroves, Seagrass, and Eco-Structures in Coastal Wave Attenuation
Oluwole Daniel Makinde Stellenbosch University, South Africa	Breaking Nonlinearity Barriers in Science and Engineering with a Hermite–Padé Computational Framework
Stéphane Mangouala African Society for Industrial and Applied Mathematics, Gabon	Lembangwean Analysis :Optimization of Logic Functions of Second Complete Conjunctive Normal Form using Linear Mathematical Complexity $O(2^n)$ and Two Modulable Analytical Principles
Martin Le Doux Mbele Bidima University of Yaounde I, Cameroon	A Novel Fractional Binary Model for Option Pricing: Market Completeness and Convergence
Stephen Moore University of Cape Coast, Ghana	Discrete-Time Optimal Control of Species Augmentation in Interacting Population Models
Intan Muchtadi Institut Teknologi Bandung, Indonesia	Topological Data Analysis for COVID-19 Classification from 5 Lung CT-Scan Images
Kok Haur Ng Universiti Malaya, Malaysia	Control Chart for Monitoring Fraction Nonconforming based on the Generalised Beta of the First Kind Distribution

Name and Affiliation	Talk Title
Tan Minh Nguyen National University of Singapore, Singapore	Steering Large Language Models: A Geometric and Control-Theoretic Approach
Juan-Pablo Ortega Nanyang Technological University, Singapore	A Global Structure-preserving Kernel Method for the Learning of Hamiltonian Systems
Thi Ha Duong Phan Vietnam Academy of Science and Technology, Vietnam	Random Walks and Algorithms on Graphs
Nurul Huda binti Mohd Ramli Universiti Brunei Darussalam, Brunei	Computational Mathematics of Kilometer-Scale Regional Climate Downscaling over Borneo
Fatimah Abdul Razak Universiti Kebangsaan Malaysia, Malaysia	Thinking in Networks: Mathematical Perspectives on Connected Systems
Wil Schilders Eindhoven University of Technology, Netherlands	Advancing Scientific Machine Learning in Industry
Baba Seidu University of Technology and Applied Sciences, Ghana	Threshold quantities and Lyapunov functions for Ordinary differential equations Epidemic models with Mass action and Standard incidence functions
Yvonne Stokes The University of Adelaide, Australia	Particle migration and Focusing in Microfluidic ducts
Pagdame Tiebekabe University of Kara, Togo	Sums of Three Fibonacci Numbers as Concatenations of Repdigits in Base $b$
Getachew Teshome Tilahun Haramaya University, Ethiopia	A Mathematical Framework for Within-Host Mycobacterium Tuberculosis Infection and Host Immune Dynamics
Kim Chuan Toh National University of Singapore, Singapore	Adam-family Methods with Decoupled Weight Decay
Cornelis Vuik Delft University of Technology, Netherlands	Deflation-based Preconditioning for Immersed Finite Element Methods
Carol Woodward Lawrence Livermore National Laboratory, USA	Numerical Software Packages from the FASTMath Institute and Their Applications

Name and Affiliation	Talk Title
Yao Yao National University of Singapore, Singapore	Stability and Growth in Incompressible Euler Equations
Tao Zhou Chinese Academy of Sciences, China	Overcoming Spectral Bias via Cross-Attention
Jun Zou The Chinese University of Hong Kong, Hong Kong SAR	Two-level Domain Decomposition-type Preconditioners for the Helmholtz Equation with High Wavenumber