

ICMMP 2026 Abridged Program

	DAY 0 30 October Friday	DAY 1 31 October Saturday	DAY 2 1 November Sunday	DAY 3 2 November Monday	DAY 4 3 November Tuesday
Morning 9:00-12:30		Opening Speech	S1. Quantum Field Theory, String and Brane Theory, and Gravitation	S4. Atomic, Molecular, and Optical Physics	Dismiss
		S2. Integrable Models in Condensed Matter Physics and Statistical Physics	Plenary: Prof. Piljin Yi	Plenary: Prof. Thierry Giamarchi	
		Plenary: Prof. Yupeng Wang			
		Keynote 1: Prof. Tomaz Prosen	Keynote 1: Prof. Ruben Minasian	Keynote 1: Prof. Roberta Citro	
		Coffee Break (30 min)			
		Keynote 2: Prof. Yunfeng Jiang	Keynote 2: Prof. Urs Schreiber	Keynote 2: Prof. Shizhong Zhang	
		Keynote 3: Prof. Benjamin Doyon	Keynote 3: Prof. Sameer Murthy	Award Ceremony & Closing Remarks	
		Lunch Break			
Afternoon 14:00-18:00	Arrival Day & Registration	S5. Nonlinear Dynamics and Computational Physics	S1. Quantum Field Theory, String and Brane Theory, and Gravitation	Social Activities	
		Plenary: Prof. Michael Berry	Keynote 4: Prof. Chi-Ming Chang		
		Honorary Degree Conferment: Prof. Michael Berry (Zhejiang University)	S3. Quantum Information and Quantum Metrology		
		Coffee Break & Poster Session A (50 min)	Plenary: Prof. Augusto Smerzi		
		Keynote 1: Prof. Haiqing Lin	Coffee Break & Poster Session B (50 min)		
		Keynote 2: Prof. Rudolf A. Roemer	Keynote 1: Prof. Qiongyi He		
		Conference Banquet	Keynote 2: Prof. Murray Batchelor		
18:00-20:00			Buffet Dinner		

ICMMP 2026 Detailed Program

ICMMP 2026 Detailed Program - The 1st International Conference on Modern Mathematical Physics		
DAY 1 (31 October, Saturday)		
Morning		
9:00-9:10	Opening Ceremony	
S2. Integrable Models in Condensed Matter Physics and Statistical Physics Chaired By: Prof. Balazs Pozsgay Eötvös Loránd University, Budapest, Hungary		
9:10--10:00	Plenary Speech Prof. Yupeng Wang Chinese Academy of Sciences, Beijing, China	Exact Thermodynamics and Fractional Degeneracy of the XX Spin Chain with Arbitrary Boundary Fields
10:00-10:40	Keynote Speech Prof. Tomaz Prosen University of Ljubljana, Ljubljana, Slovenia	Integrable Interactions Round-a-Face and Exactly Solvable Quantum/Stochastic Cellular Automata
10:40-11:10	Coffee Break	
11:10-11:50	Keynote Speech Prof. Yunfeng Jiang Southeast University, Nanjing, China	TTbar-Deformed CFT Partition Functions: Uniqueness, Resurgence, and Harmonic Analysis
11:50-12:30	Keynote Speech Prof. Benjamin Doyon King's College London, London, UK	Emergence of Unconventional Hydrodynamics from Soliton-Like Interactions: Waves in the Sea, Fields in Optic Fibres, Atoms in Traps
12:30-14:00	Lunch Break	
Afternoon		
S5. Nonlinear Dynamics and Computational Physics Chaired By: Prof. Wenli Yang Northwest University, Xi'an, China		
14:00-14:50	Plenary Speech Prof. Michael Berry University of Bristol, Bristol, UK	Divergence and Resurgence
14:50-15:20	Ceremony for Conferring Honorary Degree on Professor Michael Berry by Zhejiang University	
15:20-16:10	Coffee Break + Poster Session A	
16:10-16:50	Keynote Speech Prof. Haiqing Lin Zhejiang University, Hangzhou, China	TBD
16:50-17:30	Keynote Speech Prof. Rudolf A. Roemer University of Warwick, Coventry, UK	Transfer-Matrix Studies of Finite-Range Disordered Hopping Models

Day 2 (1 November, Sunday)		
Morning		
S1. Quantum Field Theory, String and Brane Theory, and Gravitation Chaired By: Prof. Jianxin Lu University of Science and Technology of China, Hefei, China		
9:00-9:50	<i>Plenary Speech</i> Prof. Piljin Yi Korea Institute for Advanced Study, Seoul, Korea	Conservation Laws Redux
9:50-10:30	<i>Keynote Speech</i> Prof. Ruben Minasian Paris-Saclay University, Paris, France	Holography and SymTFTs
10:30-11:00	<i>Coffee Break</i>	
11:00-11:40	<i>Keynote Speech</i> Prof. Urs Schreiber NYU Abu Dhabi, Abu Dhabi, United Arab Emirates	Electromagnetic Flux Quantization: Global Completion of Higher Gauge Theories
11:40-12:20	<i>Keynote Speech</i> Prof. Sameer Murthy King's College London, London, UK	TBD
12:20-14:00	<i>Lunch Break</i>	

Afternoon		
S1. Quantum Field Theory, String and Brane Theory, and Gravitation Chaired By: Prof. Jianxin Lu University of Science and Technology of China, Hefei, China		
14:00-14:40	<i>Keynote Speech</i> Prof. Chi-Ming Chang Tsinghua University, Beijing, China	Q-cohomology, Fortuity, and Black Holes
S3. Quantum Information and Quantum Metrology Chaired By: Prof. Xiwen Guan University of Chinese Academy of Sciences, Wuhan, China		
14:40-15:30	<i>Plenary Speech</i> Prof. Augusto Smerzi Shenzhen Technology University (SZTU), Shenzhen, China	Unveiling Useful Entanglement: Quantum Advantage in Sensing and Metrology
15:30-16:20	<i>Coffee Break + Poster Session B</i>	
16:20-17:00	<i>Keynote Speech</i> Prof. Qiongyi He Peking University, Beijing, China	Characterizing the Multipartite Entanglement Structure of Non-Gaussian Continuous-Variable States
17:00-17:40	<i>Keynote Speech</i> Prof. Murray Batchelor Australian National University, Canberra, Australia	Exact Many-Body Structures, Goldstone Modes and Quantum Entanglement

Day 3 (2 November, Monday)		
Morning		
S4. Atomic, Molecular, and Optical Physics Chaired By: Prof. Murray Batchelor Australian National University, Canberra, Australia		
9:00-9:50	Plenary Speech Prof. Thierry Giamarchi University of Geneva, Geneva, Switzerland	Correlations and Dimensionality in Cold Atomic Gases
9:50-10:30	Keynote Speech Prof. Roberta Citro University of Salerno, Campania, Italy	Out of Equilibrium Dynamics of Interacting One Dimensional Systems: Correlation Dynamics, Thermal Fate and Parametric Resonances
10:30-11:00	Coffee Break	
11:00-11:40	Keynote Speech Prof. Shizhong Zhang The University of Hong Kong, Hong Kong, China	Physics of an Ion Impurity in a Dilute Fermi Gas
11:40-12:10	Closing Ceremony	
12:10-14:00	Lunch Break	

Poster Sessions

Poster Session A, DAY 1 (31 October, Saturday) | 15:20 - 16:10

Poster Session B, DAY 2 (1 November, Sunday) | 15:30 - 16:20

- Regardless of whether your poster is assigned to Session A or Session B, please post your poster by 14:00 on 31 October.
- Materials including scissors, tape and other supplies will be provided on site.
- All posters must be removed between 16:30 and 22:00 on 1 November. Posters left unattended after the deadline will be removed by conference staff. The conference organizers do not guarantee safe custody or return of such posters.

Poster Session A, DAY 1 (31 October, Saturday) | 15:20 - 16:10

No.	Name	Title
1	C. A. Fan	A New Superstring Theory – From the Origin of Maxwell's Equations to the Supersymmetric Structure of Elementary Particles
2	Barco Jie You	Quantum-Gravitational Foundations of Intelligence: A Unified Field Theory of Entropic Computation
3	Marcus Schmieke	Schrödinger and Einstein from One Fokker–Planck Equation: A Regime Limit and a Submanifold Embedding
4	Tongsheng Xia	A Model for the Higgs Field
5	Hyeonseong Park	A Relative-Time Theory-of-Everything Kernel: Outer–Micro Boundary Selectors, Calibrated Branches, Gauge Connections, Spectra, and Cosmology
6	Amin Omarouayache	Black Hole Separability: Umbilical Foliations and the Generalised Killing-Yano Polyform
7	Omar Khattabomar	Emergent Spacetime Topology via Entropic Brane-Interactions in Non-Commutative Quantum Field Theory
8	Sergiu Vasili Lazarev	Informational Gravity: Emergence from Subquantic Oscillations and Recovery of General Relativity and Quantum Mechanics
9	Luiza Arievalo	Quantum Fields, Strings, Branes, and Gravitation: Emergent Geometry and the Quantum Structure of Space-Time
10	Chang Lei	M2-Brane Indices on Higgs Vacua and Black Holes
11	Rulin Xiu	Holographic Origin of Matter Dominance, Weak CP Violation, and Complex Phenomena: A Unified Theory Beyond the Standard Model
12	Yang Lei	Mellin Transformation and Higher Rank of Modular Transformation
13	Hua-Chen Zhang	Entropic Order Parameters and Topological Holography
14	Laura Batini	Critical Dynamics of a Scalar Field near Four Spatial Dimensions
15	Jianan Wang	Abandon Symmetry, Uphold Conservation Laws: A New Paradigm and Development Prospects for Physics
16	Xiao-Yang Yang	Solving Nonequilibrium Dynamics via Influence Matrix Bootstrap: Floquet-PXP Model
17	Junaid Sarfraz	A New Family of Entropy-Based Weighted Distributions: Theoretical Foundations, Statistical Properties, and Applications
18	De-Zhang Li	Free-Fermion Approach to the Partition Function Zeros: Special Boundary Conditions and Product Form of Solution
19	Elmira Yu. Kalimulina	Condensate Relocation and Local Condensation in Zero-Range Processes on Graphs with Bottlenecks
20	Nasiru Mohammed Mangga	On the Algebraic and Combinatorial Properties of the Semigroup of Order-Preserving Partial Injective Transformations with Interval Domains and Interval Images
21	Huai-Yu Wang	The Axiomatic System Containing Quantum Mechanics and Classical Mechanics
22	Salihu Lawan Aliyu	Statistical Orbit Invariants for Quantifying Graph Symmetry Under Wreath Product Actions and Cartesian Power Graphs
23	Rui-Dong Zhu	A Class of Non-Invertible Symmetries on Lattice from Integrability and Parafermion
24	Jian Xian Sim	Resonance-Suppression Principle for Prethermalization Beyond Periodic Driving
25	Hanaa Abu-Zinadah	A Statistical Physics Framework for Modeling Solar Irradiance Using the Inverse Ishita Distribution
26	Jiazhen Liu	Dynamical Phase Transitions in Nonequilibrium Networks
27	Nicolo Defenu	Irreversibility Without Dissipation
28	Egor Teplyakov	Topological Aspects of Graphene
29	Kazunari Hashimoto	Spectroscopic Fingerprints of Liouvillian Exceptional-Point Order in Nonequilibrium Current Noise
30	Soukaina HADIRI	The Mixed Bifractional Brownian Motion
31	Yuguan Li	Exact Solution and Ground-State Energy of the Periodic Baxter–Fendley ZN Chain
32	Luiza Arievalo	Entanglement-Enhanced Coherent Control in Ultracold Atomic and Molecular Systems
33	Xinran Zhang	Breathing Mode of Quantum Droplets in Dipolar Quantum Gases: A Sum-Rule Analysis
34	Tian-Cheng Yi	Topological and Mott Phases Driven by Gain and Loss in a Correlated Chern Insulator
35	Zizhou Yuan	Sound Propagation in One-Dimensional Quantum Droplets
36	Shuang Zhang	Universal Drude Weights in One-Dimensional Repulsive Fermi Gas
37	Dawei Niu	Fractional Fermi Seas Induced by Interaction Cycles in a One-Dimensional Spin-1/2 Fermi Gas
38	Zhen-Xia Niu	Understanding Critical Dynamics in a Spinor Bose–Einstein Condensate via Quantum and Semiclassical Analyses
39	Yuan-Tai Wang	Reconstructing Holographic Geometry from Real-Space Entanglement
40	Sampriti Saha	Photon Correlation Microscopy of Quantum Matter

Poster Session B, DAY 2 (1 November, Sunday) | 15:30 - 16:20

No.	Name	Title
41	Bing Han	Deep Reinforcement Learning Particle Swarm Optimization Method for Quantum Noise Suppression
42	Hangshi Xu	Topological Protection in Structured Environments: From Quantum Information to Biological Systems and Cosmological Scales
43	Ken Krechmer	Schrödinger's Cats Superposition and Measured Time
44	Ke Pan	On the Foundation of Quantum Optics
45	Jia-Xuan Liu	Quantum Estimation with State Symmetry-Induced Optimal Measurements
46	Anass Habib	Generalized $\mathfrak{su}_f(1,1)$ Algebra and Associated Coherent States
47	Lei Chen	A New Method for Transformation Between Different Bases of Spherical Harmonic Oscillator
48	Salvatore Marco Marco Giampaolo	Nonlocal Magic from the Entanglement Spectrum
49	Yifan Liu	Arithmetic Tuning of Dynamical Critical Exponents in Quasiperiodic Localization Transitions
50	Bei bei Tian	Stability of Many-Body Critical Phases
51	Yan-Chao Li	Multipartite Entanglement Serves as a Faithful Detector for Quantum Phase Transitions
52	Wen-Tao Xu	Detecting Topological Phase Transitions with String Order Parameters Associated with Emergent 1-Form Symmetry
53	Luyang Li	Quantum-Circuit Implementation of Non-Markovian Collision Models: Accuracy, Circuit Complexity, and Representation Dependence
54	Andrea Solfanelli	Error Correction and Quantum Information Spreading on Sparse Random Graphs
55	Hong Jiang	Quantum Phase Transitions and Quantum-Information Characterization of a Non-Hermitian XY Chain with Staggered Dzyaloshinskii–Moriya Interactions
56	You Zhou	(Shallow) Phase Circuits for Quantum Randomness and Measurements
57	Haoyu Chu	Sparse Regression Enhanced Neural Operator for Learning and Identifying Energy-Based PDEs
58	Yajie Li	Stochastic Dynamics and Bifurcation Control of a Generalized Tristable Rayleigh–Duffing System with Fractional Inertial Element and Time Delay Feedback Under Combined Gaussian Noises
59	Mfano Charles	A Stochastic Continuous-Time Markov Chain (CTMC) and Deterministic Mathematical Model for Dengue Transmission Dynamics: Assessing Vector Control Strategies and Climate Variability
60	Gabriel Samaila	Beyond the Linear Approximation: MHD Free Convection with Nonlinear Thermal Radiation and Nonlinear Boussinesq Buoyancy over a Vertical Plate
61	Teerapong Suksumran	Computational Tools for Measuring Non-Associativity in Einstein Velocity Addition
62	Xuebin Qin	Consistent Random-Source and Random-Field Frameworks for Maxwellian Spatial Correlation Analysis
63	Lumeng Xu	Green's Function-Based Correlation Propagation for Maxwellian Random Fields
64	Khalid Aldawsari	Mathematical Analysis of Algal Diseases Dynamics with Nutrient-Based Optimal Control Strategies
65	Nikolai Sergeevich Akintsov	Symplectic PINN-Enhanced Integrators for Relativistic Charged Particle Dynamics in Extreme Laser-Plasma Environments
66	Syl Shaw	Eigenvalue Statistics of the Spectral Localizer in the Anderson Model
67	Hamisu Musa	A Diagonally Implicit Three-Point Block Extended Backward Differentiation Formula with Stability Control Parameter for Stiff Initial Value Problems
68	Zhou Juncheng	Study of the Compressive Creep Damage Property of the Bamboo Scrimber Based on a Double Damping Body Model and Different Derivative Approaches
69	Zhanchun Tu	First Integrals of the Axisymmetric Helfrich Equation
70	Qianqian Xia	Geometry of Constrained Connection Systems
71	Emmanuel Kengne	Impacts of Mathematical Gaps on Physics: The Case of AND ($\wedge$), OR ($\vee$), Implications ($\Leftarrow, \Rightarrow$), and Equivalence ($\Leftrightarrow$)