

Day 1

Wednesday 1 July 2026

8:00-9:00

Registration

9:00-9:10

Opening Ceremony (Event Chairs: Prof. Dr. Miguel Rubi and Prof. Dr. Kevin H. Knuth)

9:10-9:15

Session 3. Quantum Information and Quantum Computing

9:15-9:45

Prof. Dr. Ariel Caticha

Keynote Speaker

Towards an Entropic Quantum Gravity

9:45-10:15

Prof. Dr. Eli Barkai

Keynote Speaker

First-Passage and Hitting Times in Monitored Quantum Systems on NISQ Platforms

10:15-10:30

Thomas Scheidsteiger

Oral Presenter

The Quantum Turn of Entropy: A Bibliometric Journey Through Quantum Information and Quantum Computation

10:30-10:45

Newshaw Bahreyni

Oral Presenter

A Study of Fluctuation Growths of Observables in Open Quantum Systems

10:45-11:20

Coffee Break

Poster Session A (35 min)

11:20-11:50

Prof. Dr. Stefano Mancini

Keynote Speaker

The Capacity of a Single Quantum Neuron

11:50-12:05

Luca Nigro

Oral Presenter

Quantum Reservoir Computing via Intrinsic and Engineered non-Unitary Dynamics

12:05-12:20

Seyedali Mousavi

Oral Presenter

Multi-Objective Quantum Architecture Search under Noise via Expressibility-Guided Evolution

12:20-14:00

Lunch Break

14:00-14:05

Session 4. Thermodynamics and Energy Systems

14:05-14:35

Prof. Dr. Karl Heinz Hoffmann
Keynote Speaker

Finite-Time Thermodynamics of Endoreversible Systems

14:35-15:05

Dr. Péter Ván
Keynote Speaker

Fundamental and Emergent: Testing the Second Law of Thermodynamics

15:05-15:20

Adam Gadomski
Oral Presenter

Superlubric Effect of Vanishing Classical-Quantum-Measured Coefficient of Friction with Inclusion of Van der Waals Monolayer Contaminants Deposited on Graphene-Type Substrates

15:20-15:35

Angel Cuadras
Oral Presenter

A Stochastic Entropy-Based Approach to Electrochemical Battery Modeling

15:35-15:50

Özge Özkılınç
Oral Presenter

Data-Driven Screening of Choline Chloride–Monoterpenoid and –Fatty Acid Deep Eutectic Solvents for PFAS Extraction

15:50-16:25

Coffee Break

Poster Session A (35 min)

16:25-16:30

Session 8 Introduction 5 min

16:30-17:00

Dr. Juan F. Pedraza
Keynote Speaker

Krylov Complexity as a Probe of Quantum Chaos in Many-Body Systems

17:00-17:30

Prof. Dr. Syed Ejaz Ahmed
Keynote Speaker

Reliable Post-Estimation Inference in High-Dimensional Sparse Regression

17:30-17:45

Amilcare Porporato
Oral Presenter

Environmental Thermodynamics: Bridging Science and Technology in a Changing Environment

17:45-18:00

Vítor Costa
Oral Presenter

Looking at Economics Through the Eyes of Thermodynamics: Economic Entropy, and Economic Entropy Generation

18:00-18:15

Serge Provost
Oral Presenter

Quantifying the Representational Power of Consecutive Moments: A Relative Entropy Perspective

18:15-18:30

Ignácio Iturrioz
Oral Presenter

Linking Entropy Measures in Quasi-Brittle Material Specimens and Statistical Models to Global Acoustic Emission

18:30-18:45

Kazuko Sugimoto
Oral Presenter

Internal Defect Detection Using Spatial Spectral Entropy in Noncontact Acoustic Inspection and COMSOL Analysis of Flexural Vibration

20:00-21:00

Dinner Banquet

Day 2

Thursday 2 July 2026

8:30-9:00

Registration

9:00-9:05

Session 1. Complex Systems and Network Science

9:05-9:35

Prof. Dr. M. Ángeles Serrano
Keynote Speaker

Statistical Mechanics of Random Graphs within the Fermionic Maximum-Entropy Framework

9:35-10:05

Prof. Dr. José Fernando F. Mendes
Keynote Speaker

When Does Diversity Matter in Binary-Choice Dynamics?

10:05-10:20

Luciano Telesca
Oral Presenter

Quantifying complexity in synthetic earthquakes generated by the Olami–Feder–Christensen spring-block model

10:20-10:35

Antoni Hernández-Fernández
Oral Presenter

Do Linguistic Laws Emerge from Physics? Statistical Regularities in Photonic Neurons

10:35-11:10

Coffee Break
Poster Session B (35 min)

11:10-11:40

Prof. Dr. Marta Sales Pardo
Keynote Speaker

TBA

11:40-11:55

Johan L.A. Dubbeldam
Oral Presenter

Understanding extinction events in minimal nonlinear random models for population using the theory of statistical learning

11:55-12:10

Jan Korbel
Oral Presenter

Homophily-Based Social Group Formation in a Spin Glass Self-Assembly Framework

12:10-12:25

Ioannis Antoniadis
Oral Presenter

Network Generation by Vertex-based Wiring and Restricted Resources

12:25-14:00

Lunch Break

14:00-14:05

Session 7. Soft and Living Matter

14:05-14:35

Prof. Dr. Jose M.G. Vilar
Keynote Speaker

Entropy as an Active Remodeling Principle in Biomolecular Nanostructure Disassembly

14:35-15:05

Prof. Dr. David Reguera
Keynote Speaker

Shaping Viruses with Entropy: Assembly Kinetics of Viral Capsid Formation

15:05-15:20

Santiago Pelosso Rodríguez
Oral Presenter

Modeling Chaotropic and Kosmotropic Ion Effects on Entropy and Diffusion of Water

15:20-15:35

Miriam Martinez
Oral Presenter

Quantifying Insect Dynamics in Euclidean and Non-Euclidean Spaces

15:35-16:10

Coffee Break

Poster Session B (35 min)

16:10-16:15

Session 5. Non-Equilibrium Systems and Entropy Production

16:15-16:45

Prof. Dr. Bernardo Spagnolo
Keynote Speaker

Noise-Assisted Metastability and Noise-Enhanced Perception

16:45-17:00

Veaceslav Albu
Oral Presenter

Entropy's Other Half: How Information Melts Potential into Memory

17:00-17:15

Rudolf Hanel
Oral Presenter

Irreversibility in the Ideal Gas Model and a Thermodynamic Time-Energy Uncertainty Principle

17:15-17:30

Oded Farago
Oral Presenter

Entropy Production in Run-and-Tumble Particles Mapped to Brownian Motion in an Inhomogeneous Temperature

17:30-17:45

David Papo
Oral Presenter

Time-Reversal Symmetry in Brain Pathology

17:45-18:00

Jean-Marc Simon
Oral Presenter

Adsorption Kinetics Model of Hydrogen on Graphite

18:00-18:15

Francisco J. Cao-García
Oral Presenter

Ligand Binding in Crowded Polymers

18:15-18:30

Matteo Colangeli
Oral Presenter

Stochastic Chains Coupled to Thermal Reservoirs

Day 3

Friday
3 July 2026

8:30-9:00

Registration

9:00-9:05

Session 6. Statistical Physics and Stochastic Processes

9:05-9:35

Prof. Dr. Hong Qian
Keynote Speaker

Neo-Gibbsian Statistical Energetics with Applications to Nonequilibrium Cells

9:35-9:50

Aleksei Chechkin
Oral Presenter

Genuine and Spurious (Non-)Ergodicity in Single Particle Tracking

9:50-10:05

Ronen Zangi
Oral Presenter

Chemistry with Small Number of Molecules

10:05-10:20

Jean-Luc Garden
Oral Presenter

Entropy Fluctuations in Stochastic Thermodynamics

10:20-10:35

Guillermo Chacón-Acosta
Oral Presenter

Curvature-Induced Effects in Time-Subordinated Diffusion

10:35-11:00

Coffee Break (25 min)

11:00-11:30

Prof. Dr. Ralf Metzler
Keynote Speaker

Anomalous Diffusion, Non-Gaussianity and Long-Range Dependent Motion

11:30-11:45

Jose Luis Calabrese
Oral Presenter

Why Do Spiral Galaxies Rotate So Fast? Same Gravity Theory, Different Dynamical-Regime Model

11:45-12:00

Lamberto Rondoni
Oral Presenter

Power-Law Tails and Universality for Strong Anomalous Diffusion

12:00-12:15

Ofir E. Alon
Oral Presenter

Solvable Model of Induced Interactions in Bose-Einstein Condensates

12:15-13:30

Lunch Break

13:30-13:35

Session 2. Information Theory, Data Science and Artificial Intelligence

13:35-14:05

Prof. Dr. Kevin H. Knuth
Keynote Speaker

The Statistical Mechanics of Motion

14:05-14:20

Andres Aragoneses
Oral Presenter

The Linguistic Organization of Complex Systems

14:20-14:35

Hiroshi Matsuzoe
Oral Presenter

Invariant and Dually Flat Structures in Information Geometry for Deformed Exponential Families

14:35-14:50

Federico Fogolari
Oral Presenter

K-th Nearest Neighbour Entropy for Classification

14:50-15:05

Veronica Sanz-Arqué
Oral Presenter

Stochastic Resetting with Limited Information

15:05-15:30

Coffee Break (25 min)

15:30-16:00

Prof. Dr. Olivier Rioul
Keynote Speaker

Dual Representations of Classical and Quantum Entropies: Theory and Perspectives

16:00-16:15

Valeria Rossi
Oral Presenter

Mutual Information Based on Kolmogorov Complexity for Randomness Evaluation

16:15-16:30

Francisco J. Valverde-Albacete
Oral Presenter

On Information Transmission in Multilabel Classifications Tasks

16:30-16:45

Martin Schlather
Oral Presenter

70 Years of Bandwagon: Shannon's Viewpoint Revisited

16:45-16:55

Interview
Speakers

16:55-17:10

Award Ceremony
Chairs' Closing Remarks

Poster Session A (S3, S4, S8, S1, S7)

1.	Mile Dželalija	<i>Entropy-Based Correlation Operator in the Hilbert Space Representation of Biomedical Complex Systems</i>
2.	Michel Aguilera	<i>Thermodynamic Behavior of the Dipolar Q-State Clock Model on Large Lattices: A Monte Carlo Study</i>
3.	Juan C. Pacheco-Páez	<i>Efficient Power in an Arrangement Series of Endoreversible Thermal Engines</i>
4.	Juan C. Pacheco-Páez	<i>Entropy Generation Trade-Offs in Finite-Time Irreversible Otto–Atkinson/Miller Engines under Efficient Power, Ecological, and Hybrid Ecological Regimes</i>
5.	Fernando Moreno	<i>From Data-Driven to Physics-Informed AI: Explainable Energy Optimization in Industrial Systems</i>
6.	Takuya Yamano	<i>Thermodynamic Meaning of Statistical Factor in Systems with Temperature-Dependent Energy Levels</i>
7.	Miloslav Pekař	<i>Gibbs Energy, Chemical Reactions–(In)Consistencies</i>
8.	Dani Rodríguez Castellanos	<i>Thermodynamic Framework for q-Affinity</i>
9.	Angel Cuadras	<i>A Holistic Approach to Residential Metabolism: The Entropic Cost of Demographic Fragmentation</i>
10.	Angel Cuadras	<i>Entropy Description of Projectile Motion in Dissipative Media</i>
11.	Rytis Petrauskas	<i>Transposing Econophysical Entropic Criteria to Scientific Time Series: A Framework for Volatility-Scaled Data Curation</i>
12.	José Juan Peña	<i>The Decay Equation: A Generalization from Nonextensive Statistics and k-Statistics Based on the q-Calculus</i>
13.	Milan Rybář	<i>Entropy Dynamics Differentiate Deliberate and Arbitrary Decisions in EEG</i>
14.	Ghaya Mehdi	<i>Dispersion Phase Entropy: An Enhanced Complexity Measure Incorporating Phase Dynamics in Nonlinear Time Series</i>
15.	Ghaya Mehdi	<i>Multi-Scale Circulant Determinant-based Permutation Entropy for HDsEMG Signal Processing</i>
16.	Sayuri Ishiyama	<i>Emergence of Life and Relational Entropy: Nonlinear Dynamics of the Fetus–Maternal System</i>
17.	Marta Lotka	<i>Multiscale Structural Organization of the Brain Breaks Down in Aging and Dementia: Insights from Multifractal Space-Filling Curve Analysis (MFSCA)</i>
18.	João de Sant'Ana	<i>Prejudice and Discrimination in a Society of Neural Networks</i>
19.	Rustu Demirer	<i>Spectral Criticality at the Interface of Analytic Number Theory and Neural Field Theory: Entropy Production, Zero Repulsion and Cortical Symmetry Breaking</i>
20.	Gordon Morison	<i>Generalized Permutation Entropy Measures on Graph Signals</i>
21.	Anna Monclús I Rojo	<i>Correlations in Active Nematic Defects</i>
22.	Javier Orradre Altabas	<i>A Many-State Conformational-Binding Model to Describe Polymer Force-Extension Curves</i>
23.		
24.		

Poster Session B (S5, S6, S2)

1.	Vicent Moltó-Gallego	<i>Rolling Bearing Fault Classification Approach Combining Slope Entropy and Downsampling Schemes</i>
2.	Klaus Morawetz	<i>Correlational Entropy by Nonlocal Quantum Kinetic Theory</i>
3.	Huilong Ren	<i>Path-Dependent Energy Lagrangian for Irreversible Thermomechanical Systems</i>
4.	Andrés Vallejo	<i>Alternative Analysis of Single-Qubit Quantum Heat Engines</i>
5.	Amna Khraibut	<i>A Stochastic Analysis of a Hypersonic Planar Flow Using a Fokker–Planck Approximation</i>
6.	Eugenio Vogel	<i>Mutability as a Dynamic Function Bound by Entropic Functionals</i>
7.	Pasquale Vozza	<i>Bridging Exact Response Theory with the Karhunen–Loève expansion</i>
8.	Carlos Escudero	<i>Structural Conditions for a Driftless Langevin Representation of Heterogeneous Fickian Diffusion</i>
9.	Mateusz Wiśniewski	<i>Fast Directed Transport via Energy Recuperation in Non-Markovian Media</i>
10.	Karol Białaś	<i>Absolute Negative Mobility in the Overdamped System Driven by Active Fluctuations</i>
11.	Giuliana Paradiso	<i>Statistical Scaling Analysis of Seismic Acceleration Signals</i>
12.	Antonio Pons	<i>Exploring Complex Systems as Language Generators</i>
13.	Federico Vello	<i>Benchmarking the kth-Nearest Neighbor Method for Classification</i>
14.	Pieter van Rooyen	<i>Entropy, Annealing, and the Continuity of Agency in Human–AI Systems</i>
15.	Thiago Mascarenhas	<i>EID—Exponential Informational Decay: A Dynamic Model for Measuring Information Preservation in Multi-Agent Systems Based on LLMs</i>
16.	Jiping Yang	<i>A Fund Rating Approach Based on the Expected Utility–Entropy–Variance Model and Its Application</i>
17.	Shanzi Bao	<i>Entropy Dynamics as a Diagnostic of Information Accumulation in Graph Neural Networks</i>
18.	Raphaël Trésor	<i>Shifting the Foundations of Information Theory: From Numerical Optimization to Ordering Axioms</i>
19.	Newshaw Bahreyni	<i>Euclidean Geometry in Influence Network of Events: An Observer-Based Geometry</i>
20.	Dana Polatin	<i>‘I Am Not My Language’: Human Cognition, Misattributed Intelligence, and the Extractive Risk of Large Language Models</i>
21.	Sergio Alejandro Jalfin	<i>Information-Theoretic Analysis of the ENSO–Precipitation Relationship in Buenos Aires</i>
22.	Yuri L. Borissov	<i>Information-Theoretic Limits for a Single-Layer Additive Cipher with Linear-Code Plaintext Source</i>
23.	Xin-Ya Zhang	<i>Temperature-Driven Escape Explains Critical Learning Rates in Adaptive Optimization</i>
24.	Giorgos Minas	<i>A Study of the Use of Decoding Based Methods for Estimating Mutual Information in Biomolecular Systems</i>