

## WOST V Schedule

### Monday 13th May – Foundations of stochastic thermodynamics

Session chair: David Wolpert/Jan Korbelt

3:00 pm CEST - invited talk

Karel Proesmanns: Inferring entropy production for time-dependent systems

3:30 pm CEST – invited talk

Felix Ritort: Variance sum rule for entropy production

4:00 pm CEST – lightning talk

Miguel Ibanez: Anomalous Relaxation Phenomena in Trapped Colloids:  
Heating is Faster than Cooling

4:15 pm CEST – lightning talk

Timur Aslyamov: Theory of Static Response for Markov Jump Processes

4:30 pm CEST – lightning talk

Luís Pires: Entropic cost and optimization for Brownian thermal shortcuts

4:45 pm CEST – break

5:00 pm CEST – lightning talk

Cai Dieball: Thermodynamic bounds on generalized transport:  
From single-molecule to bulk observables

5:15 pm CEST – lightning talk

J eremie Klinger: Universal energy-speed-accuracy trade-offs in driven nonequilibrium systems

5:30 pm CEST – invited talk

Patrick Pietzonka: Thermodynamic cost for a precise sequence of events

6:00 pm CEST – invited talk

Andr e Barato: Second law for active heat engines

## WOST V Schedule

### Tuesday 14th May – Biophysics and active matter

Session chair: Edgar Roldán/Udo Seifert

3:00 pm CEST – invited talk

Thomas Speck: Stochastic thermodynamics for motile active matter

3:30 pm CEST – invited talk

Sabine Klapp: Thermodynamics of feedback-driven particles

4:00 pm CEST – lightning talk

Daiki Sekizawa: Decomposing thermodynamic dissipation of neural dynamics via spatio-temporal oscillatory modes

4:15 pm CEST – lightning talk

Benjamin Qureshi: Low-cost information propagation in biopolymer templating networks

4:30 pm CEST – lightning talk

Robin Bebon: Thermodynamics of active matter: Tracking dissipation across scale

4:45 pm CEST – break

5:00 pm CEST – lightning talk

Étienne Fodor: Active matter under control: Insights from response theory

5:15 pm CEST – lightning talk

David Hathcock: Dissipation-enhanced cooperative sensing and adaptation in bacterial chemotaxis

5:30 pm CEST – invited talk

Pablo Sartori: Combinatorial encoding of heterogeneous assemblies as kinetic traps

6:00 pm CEST – invited talk

David Sivak: Information arbitrage in molecular machines

## WOST V Schedule

### Wednesday 15th May – Physics and chemistry

Session chair: Cigdem Yalcin

3:00 pm CEST – invited talk

Hao Ge: The nonequilibrium mechanism of noise-enhanced drug synergy in HIV latency reactivation

3:30 pm CEST – invited talk

Takahiro Sagawa: Topological characterization of nonlinear dynamics

4:00 pm CEST – lightning talk

Ryuna Nagayama: Geometric thermodynamics of reaction-diffusion systems:  
Thermodynamic trade-off relations and optimal transport for pattern formation

4:15 pm CEST – lightning talk

Biswajit Das: Effects of hydrodynamic interaction on the irreversibility of mesoscopic processes

4:30 pm CEST – lightning talk

Vishwajeet Kumar: Arrhenius law for interacting diffusive systems

4:45 pm CEST – break

5:00 pm CEST – lightning talk

Kristian Blom: Milestoning estimators of dissipation in systems observed at a coarse resolution:  
When ignorance is truly bliss

5:15 pm CEST – lightning talk

Jonas Berx: Universal thermodynamic bounds on the Fano factor of discriminatory networks'

5:30 pm CEST – invited talk

Jann van der Meer: Markovian events: Relaxing the Markov assumption for thermodynamic inference

6:00 pm CEST – invited talk

Artur Widera: A quantum-statistics engine cycle in an ultracold gas

# WOST V Schedule

## Thursday 16th May – Quantum thermodynamics

Session chair: Saar Rahav

3:00 pm CEST – invited talk

Tan Van Vu: Thermodynamics of fidelity in quantum gates

3:30 pm CEST – invited talk

Bijay Kumar Agarwalla: Impact of fluctuations on the performance  
of continuous and discrete thermal machines

4:00 pm CEST – lightning talk

Kotaro Sekiguchi: Improvement Speed Limit; Analysis Quantum Effect on Speed Limit of Physical  
Quantities' Current

4:15 pm CEST – lightning talk

Pharnam Bakhshinezhad: Cooling Quantum Systems with Finite Resources:  
Optimal and Attainable Protocols

4:30 pm CEST – lightning talk

Sangyun Lee: Indirect estimation of entanglement entropy via machine learning and quantum  
circuits

4:45 pm CEST – break

5:00 pm CEST – lightning talk

Krzysztof Ptaszynski: Open-system eigenstate thermalization in a noninteracting integrable model

5:15 pm CEST – lightning talk

Paolo Andrea Erdman: Reinforcement Learning for Quantum Thermodynamics

5:30 pm CEST – invited talk

Gianmaria Falasco: Macroscopic Stochastic Thermodynamics

## **WOST V Schedule**

### **Friday 17th May – Information processing, computation and other applications**

Session chair: Velimir Ilic

3:00 pm CEST – invited talk

Andrés F. Ducuara: Stochastic Thermodynamics meets Expected Utility Theory

3:30 pm CEST – invited talk

Gonzalo Manzano: Thermodynamics of computations with unidirectional transitions, absolute irreversibility and uncertain runtime

4:00 pm CEST – lightning talk

Ruicheng Bao: Dissipation, intrinsic timescale and coarse-graining in relaxation processes

4:15 pm CEST – lightning talk

Daan Mulder: Exploiting bias in optimal finite-time copying protocols

4:30 pm CEST – lightning talk

Aubin Archambault: Exact information bound on work extraction in underdamped information engines

4:45 pm CEST – break

5:00 pm CEST – lightning talk

Ben Kuznets-Speck: The price of a bit: energetic costs and the evolution of cellular signaling

5:15 pm CEST – lightning talk

Yonathan Sarmiento: Dissipation-time thermodynamic trade-off in human decision making

5:30 pm CEST – invited talk

Suriyanarayanan Vaikuntanathan: On the expressivity and computational capacity of (biologically inspired) non-equilibrium circuits