

## Physics of Socio-economic Systems Division Fachverband Physik sozio-ökonomischer Systeme (SOE)

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### Overview of Invited Talks and Sessions

(Lecture hall GÖR/0226; Poster P4)

#### Invited Talks

SOE 2.1	Mon	9:30–10:00	GÖR/0226	<b>Memory and equilibrium in collective animal behaviour — •THIERRY MORA</b>
SOE 5.1	Tue	9:30–10:00	GÖR/0226	<b>Network Science in Criminology: Insights from Empirical Case Studies — •MASARAH PAQUET-CLOUSTON</b>
SOE 8.1	Wed	9:30–10:00	GÖR/0226	<b>Dynamics and Structure in Temporal Networks — •NATASA DJUR-DJEVAC CONRAD</b>
SOE 14.1	Thu	9:30–10:00	GÖR/0226	<b>Generative AI and diffusion models: a statistical physics approach — •GIULIO BIROLI</b>
SOE 16.1	Thu	11:30–12:00	GÖR/0226	<b>Tipping in Strongly Perturbed Open Networks — •MARC TIMME, GEORG BÖRNER, MARISA FISCHER, JULIAN FLECK, SEUNGJAE LEE, PHILIP MARSZAL, GWENDOLYN QUASEBARTH, MALTE SCHRÖDER, MORITZ THÜMLER</b>
SOE 17.1	Fri	9:30–10:00	GÖR/0226	<b>What can we learn from neural quantum states? — BRANDON BARTON, JUAN CARRASQUILLA, ANNA DAWID, ANTOINE GEORGES, MEGAN SCHUYLER MOSS, ALEV ORFI, CHRISTOPHER ROTH, DRIES SELS, ANIRVAN SENGUPTA, •AGNES VALENTI</b>
SOE 17.6	Fri	11:15–11:45	GÖR/0226	<b>Creativity in generative AI — •MATTHIEU WYART</b>

#### Young Scientist Award Session

SOE 7.1	Tue	14:00–14:30	GÖR/0226	<b>What's that noise? Why does it make a difference? And why am I thinking about it all the time? — •DIRK BROCKMANN</b>
SOE 7.2	Tue	14:45–15:30	GÖR/0226	<b>How things spread: Complexity and criticality of inhomogeneous spreading models — •LAURENT HÉBERT-DUFRESNE</b>

#### Invited Talks of the joint SKM Dissertationspreis 2025 Symposium (SYSD)

See SYSD for the full program of the symposium.

SYSD 1.1	Mon	9:30–10:00	HSZ/0002	<b>Stochastic-Calculus Approach to Non-equilibrium Statistical Physics — •CAI DIEBALL</b>
SYSD 1.2	Mon	10:00–10:30	HSZ/0002	<b>Nonuniform magnetic spin textures for sensing, storage and computing applications — •SABRI KORALTAN</b>
SYSD 1.3	Mon	10:30–11:00	HSZ/0002	<b>Anomalous Quantum Oscillations beyond Onsager's Fermi Surface Paradigm — •VALENTIN LEEB</b>
SYSD 1.4	Mon	11:00–11:30	HSZ/0002	<b>Coherent Control Schemes for Semiconductor Quantum Systems — •EVA SCHÖLL</b>
SYSD 1.5	Mon	11:30–12:00	HSZ/0002	<b>On stochastic thermodynamics under incomplete information: Thermodynamic inference from Markovian events — •JANN VAN DER MEER</b>

## Invited Talks of the joint Symposium "The Sustainability Challenge: A Decade of Transformation" (SYSC)

See SYSC for the full program of the symposium.

SYSC 1.1	Mon	15:00–15:30	HSZ/AUDI	<b>Open-Endedness and Community-Based Approaches to Sustainability Challenges</b> — ●HIROKI SAYAMA
SYSC 1.2	Mon	15:30–16:00	HSZ/AUDI	<b>Education as a Social Tipping Element: Evidence from Climate and Physics Education Research</b> — ●THOMAS SCHUBATZKY
SYSC 1.3	Mon	16:00–16:30	HSZ/AUDI	<b>Mechanistic and Material Perspectives on Enzymatic Hydrolysis of Semicrystalline Polyesters</b> — ●BIRTE HÖCKER
SYSC 1.4	Mon	16:45–17:15	HSZ/AUDI	<b>Decarbonization Options for Industry</b> — ●UWE RIEDEL
SYSC 1.5	Mon	17:15–17:45	HSZ/AUDI	<b>Impacts of Cosmic Dust and Space Debris in the Terrestrial Atmosphere</b> — ●JOHN PLANE

## Invited Talks of the Symposium "Tipping Points in Social and Climate Systems" (SYTP)

See SYTP for the full program of the symposium.

SYTP 1.1	Thu	15:00–15:30	HSZ/AUDI	<b>Social Tipping in Heterogeneous and Polarized Populations</b> — ●SARA CONSTANTINO, SONKE EHRET, ELKE WEBER, SONJA VOGT, CHARLES EFFERSON
SYTP 1.2	Thu	15:30–16:00	HSZ/AUDI	<b>Tipping points and regime shifts in coupled social-climate systems</b> — ●CHRIS BAUCH
SYTP 1.3	Thu	16:00–16:30	HSZ/AUDI	<b>How to tune Earth system models toward tipping?</b> — ●SEBASTIAN BATHIANY, NIKLAS BOERS
SYTP 1.4	Thu	16:45–17:15	HSZ/AUDI	<b>Algorithmic amplification and contextual sensitivity in political information exposure</b> — IRIS DAMIÃO, ANA VRANIC, PAULO ALMEIDA, LÍLIA PERFEITO, ●JOANA GONÇALVES DE SÁ
SYTP 1.5	Thu	17:15–17:45	HSZ/AUDI	<b>The complex interplay between democracy and platform power</b> — ●PHILIPP LORENZ-SPREEN

## Sessions

SOE 1.1–1.2	Sun	16:00–18:15	HSZ/0004	<b>Tutorium: Physics of Behavior</b> (joint session SOE/TUT/DY)
SOE 2.1–2.10	Mon	9:30–12:45	GÖR/0226	<b>Focus Session: Physics of Behavior</b> (joint session SOE/DY)
SOE 3.1–3.4	Mon	9:30–10:30	MER/0002	<b>Sustainability: Challenges and Solutions</b> (joint session UP/CPP/SOE)
SOE 4.1–4.9	Mon	18:00–21:00	P4	<b>Poster Session</b>
SOE 5.1–5.3	Tue	9:30–10:30	GÖR/0226	<b>Network Science</b>
SOE 6.1–6.7	Tue	10:45–12:45	GÖR/0226	<b>Mobility, Traffic Dynamics, Urban and Regional Systems</b>
SOE 7.1–7.2	Tue	14:00–15:30	GÖR/0226	<b>Award Session: Young Scientist Award for Socio- and Econophysics (YSA)</b>
SOE 8.1–8.4	Wed	9:30–11:00	GÖR/0226	<b>Networks, From Topology to Dynamics I</b> (joint session SOE/DY)
SOE 9.1–9.5	Wed	11:30–12:45	GÖR/0226	<b>Economic Models</b>
SOE 10.1–10.3	Wed	15:00–15:45	GÖR/0226	<b>Networks, From Topology to Dynamics II</b> (joint session SOE/DY)
SOE 11.1–11.5	Wed	15:45–17:15	GÖR/0226	<b>Polarization</b>
SOE 12.1–12.3	Wed	17:15–18:00	GÖR/0226	<b>Statistical Physics of Politics</b>
SOE 13	Wed	18:00–19:30	GÖR/0226	<b>Members' Assembly</b>
SOE 14.1–14.6	Thu	9:30–11:15	GÖR/0226	<b>Focus Session: Physics of AI I</b> (joint session SOE/DY)
SOE 15.1–15.6	Thu	11:15–12:45	ZEU/0118	<b>Networks: From Topology to Dynamics III</b> (joint session DY/SOE)
SOE 16.1–16.4	Thu	11:30–12:45	GÖR/0226	<b>Tipping Points in Social and Climate Systems</b> (accompanying session for SYTP)
SOE 17.1–17.10	Fri	9:30–12:45	GÖR/0226	<b>Focus Session: Physics of AI II</b> (joint session SOE/DY)

## Members' Assembly of the Physics of Socio-economic Systems Division

Wednesday 18:00–19:30 GÖR/0226

- SOE poster award
- Report
- Election
- All other business