

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

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Overview of Invited Talks and Sessions

(Lecture rooms H36, H16, H1, and H43; Poster B1)

Plenary Talk related to SOE

See PV for the full plenary program.

PV VI Tue 8:30– 9:15 H1 **Linking Individual to Collective Behavior in Complex Adaptive Networks**
— ●JORGE M. PACHECO

Invited Tutorial Talks

SOE 1.1 Sun 16:00–16:50 H16 **Predicting evolution: statistical mechanics and biophysics far from equilibrium** — ●MICHAEL LÄSSIG
SOE 1.2 Sun 16:50–17:40 H16 **Voter models of social opinion formation.** — ●KATARZYNA SZNAJD-WERON
SOE 1.3 Sun 17:40–18:30 H16 **Maximum-entropy methods for network reconstruction, systemic risk estimation, and early-warning signals** — ●DIEGO GARLASCHELLI

Invited and Topical Talks

SOE 6.1 Mon 16:00–16:45 H36 **Degustibus est disputandum - The Emerging Science of Preference Formation** — ●ERNST FEHR
SOE 12.1 Wed 9:30–10:15 H36 **Booms, bust and behavioral heterogeneity in stock prices** — ●CARS HOMMES
SOE 2.1 Mon 9:30–10:00 H36 **Structure and Dynamics of Multilayer Networks** — ●GINESTRA BIANCONI
SOE 16.1 Wed 15:00–15:30 H36 **Blackouts from smart meters? Self-organized criticality and collective effects in power networks** — ●STEFAN BORNHOLDT

Young Scientist Award for Socio- and Econophysics (YSA) - Prize Talk

SOE 6.2 Mon 17:00–17:45 H36 **Community Structure in Social and Financial Networks** — ●MASON PORTER

Invited talks of the joint symposium SYCS

See SYCS for the full program of the symposium.

SYCS 1.1 Tue 9:30–10:00 H1 **Theory far from infinity: chimera states without the thermodynamic limit** — ●DANIEL ABRAMS
SYCS 1.2 Tue 10:00–10:30 H1 **Chimera patterns: Influence of topology, noise, and delay** — ●ECKEHARD SCHÖLL
SYCS 1.3 Tue 10:30–11:00 H1 **Chimera states in quantum mechanics** — ●VICTOR MANUEL BASTIDAS VALENCEIA

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| SYCS 1.4 | Tue | 11:15–11:45 | H1 | Synchronization in Populations of Chemical Oscillators: Phase Clusters and Chimeras — ●KENNETH SHOWALTER |
| SYCS 1.5 | Tue | 11:45–12:15 | H1 | Epileptic seizures: chimeras in brain dynamics — ●KLAUS LEHNERTZ |

Invited talks of the joint symposium SYSM

See SYSM for the full program of the symposium.

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| SYSM 1.1 | Thu | 9:30–10:00 | H1 | Science Forecasts: Measuring, Predicting, and Communicating Scientific Developments — ●KATY BÖRNER |
| SYSM 1.2 | Thu | 10:00–10:30 | H1 | Mapping science with variable-order Markov dynamics reveal overlapping fields and multidisciplinary journals — ●MARTIN ROSVALL |
| SYSM 1.3 | Thu | 10:30–11:00 | H1 | Network algorithms for reputation and quality in scholarly data — ●MATÚŠ MEDO, MANUEL MARIANI, YI-CHENG ZHANG |
| SYSM 1.4 | Thu | 11:15–11:45 | H1 | Modeling scientific networks in social media — ●CASSIDY SUGIMOTO |
| SYSM 1.5 | Thu | 11:45–12:15 | H1 | Modeling scientific collaboration across multiple scales: from individuals to Europe — ●ALEXANDER PETERSEN |

Sessions

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| SOE 1.1–1.3 | Sun | 16:00–18:30 | H16 | Tutorial: Evolutionary Dynamics and Applications to Biology, Social and Economic Systems (SOE / DY / BP / jDPG) |
| SOE 2.1–2.1 | Mon | 9:30–10:00 | H36 | Structural Models of Social and Economic Networks (Topical Talk Ginestra Bianconi) |
| SOE 3.1–3.6 | Mon | 10:00–11:30 | H36 | Networks: From Topology to Dynamics I (joint session SOE / DY / BP) |
| SOE 4.1–4.3 | Mon | 11:30–12:15 | H36 | Traffic, Urban and Regional Systems |
| SOE 5.1–5.4 | Mon | 12:15–13:15 | H36 | Evolutionary Game Theory (joint session SOE / BP / DY) |
| SOE 6.1–6.2 | Mon | 16:00–17:45 | H36 | Young Scientist Award for Socio- and Econophysics (YSA) - Award Ceremony |
| SOE 7.1–7.12 | Mon | 18:00–20:00 | Poster B1 | Poster |
| SOE 8.1–8.1 | Tue | 8:30– 9:15 | H1 | Plenary talk Jorge Pacheco |
| SOE 9.1–9.5 | Tue | 9:30–12:15 | H1 | Chimera States: Coherence-Incoherence Patterns in Complex Networks (SYCS, joint symposium DY / SOE / BP) |
| SOE 10.1–10.4 | Tue | 14:00–15:00 | H36 | Chimera State: Symmetry breaking in dynamical networks (session accompanying symposium SYCS) |
| SOE 11.1–11.3 | Tue | 15:00–15:45 | H36 | Networks: From Topology to Dynamics II (joint session SOE / DY / BP) |
| SOE 12.1–12.1 | Wed | 9:30–10:15 | H36 | Behavioral Models for Stock Prices (Invited Talk Cars Hommes) |
| SOE 13.1–13.4 | Wed | 10:15–11:15 | H36 | Economic Models I |
| SOE 14.1–14.4 | Wed | 11:15–12:15 | H36 | Financial Markets and Risk Management I |
| SOE 15.1–15.4 | Wed | 12:15–13:15 | H36 | Economic models II |
| SOE 16.1–16.1 | Wed | 15:00–15:30 | H36 | Collective Failures in Energy Networks (Topical Talk Stefan Bornholdt) |
| SOE 17.1–17.3 | Wed | 15:30–16:15 | H36 | Social Systems, Opinion and Group Dynamics: Dynamics of Team and Network Formation |
| SOE 18.1–18.2 | Wed | 16:15–16:45 | H36 | Social Systems, Opinion and Group Dynamics: Opinions and Innovations |
| SOE 19.1–19.3 | Wed | 16:45–17:30 | H36 | Financial Markets and Risk Management II |
| SOE 20.1–20.3 | Wed | 17:30–18:15 | H36 | Economic models III |
| SOE 21 | Wed | 18:15–19:00 | H36 | Member's Assembly |
| SOE 22.1–22.5 | Thu | 9:30–12:15 | H1 | Scientometric Maps and Models of Science and Scientific Collaboration Networks (Symposium SYSM, joint SOE / DY / BP / jDPG) |
| SOE 23 | Thu | 12:30–13:00 | Bibliothek Foyer | Places and Spaces - Exhibition of Maps of Science |

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| SOE 24.1–24.6 | Thu | 15:00–16:30 | H36 | Scientometric maps and dynamical models of scientific collaboration networks (accompanying symposium SYSM) |
| SOE 25.1–25.4 | Thu | 16:45–17:45 | H43 | Networks: From Topology to Dynamics (joint session BP / SOE / DY) |
| SOE 26.1–26.6 | Thu | 15:30–17:00 | H47 | Networks: From Topology to Dynamics (joint session DY / SOE / BP) |

Annual General Meeting of the Physics of Socio-economic Systems Division

Wednesday 18:15–19:00 H36