

# Physics of Socio-economic Systems Division

## Fachverband Physik sozio-ökonomischer Systeme (SOE)

Prof. Dr. Dirk Helbing  
 ETH, Chair of Sociology, in particular of Modeling and Simulation  
 Clausiusstr. 50, CH-8092 Zürich, dhelbing@ethz.ch

### Overview of Invited Talks and Sessions

(lecture rooms HSZ01, HSZ02, GÖR 226, and Poster 2)

#### Tutorial

SOE 1.1 Sun 16:00–18:00 HSZ 04 **Collective Dynamics of Firms: A Statistical Physics Approach** —  
 ●FRANK SCHWEITZER

#### Focus Session: Swarm Intelligence

SOE 2.1 Mon 10:15–10:45 GÖR 226 **Social Media and Attention** — ●BERNARDO HUBERMAN  
 SOE 2.2 Mon 10:45–11:15 GÖR 226 **Mobilizing society with a red balloon** — ●RILEY CRANE  
 SOE 2.3 Mon 11:15–11:45 GÖR 226 **Collective behaviour and swarm intelligence** — ●JENS KRAUSE

#### Focus Session: GPU-Computing (with DY)

SOE 5.1 Mon 14:00–14:30 GÖR 226 **Applications of GPU-Computing in Statistical Physics** — ●PETER  
 VIRNAU  
 SOE 5.2 Mon 14:30–15:00 GÖR 226 **Accelerating Monte Carlo Simulations in Statistical Physics with  
 GPU's** — ●DAVID LANDAU

#### Focus Session: Experimental Methods

SOE 10.1 Tue 13:30–14:00 GÖR 226 **Complex Economic Systems in the Laboratory** — ●CARS HOMMES  
 SOE 10.2 Tue 14:00–14:30 GÖR 226 **Multiplicative Cascades: How to model trip within cities** — ●MARTA  
 C. GONZÁLEZ  
 SOE 10.3 Tue 14:30–15:00 GÖR 226 **Human behavior on networks: lessons and perspectives from game  
 theory** — ●ANGEL SÁNCHEZ  
 SOE 10.4 Tue 15:00–15:30 GÖR 226 **Measuring Happiness** — ●PETER S. DODDS

#### Young Scientist Award for Socio- and Econophysics

SOE 8.1 Mon 17:00–17:45 HSZ 02 **Dragon-kings versus black swans: diagnostics and forecasts for the  
 on-going world financial crisis** — ●DIDIER SORNETTE  
 SOE 8.1 Mon 18:00–18:30 HSZ 02 **Community structure in networks and statistical physics of social  
 dynamics** — ●SANTO FORTUNATO

#### Joint Symposium on Foundations and Perspectives of Climate Engineering (with AKE, UP)

See SYCE for the full program of the symposium.

SYCE 1.1 Tue 10:30–11:00 HSZ 01 **Oceanic carbon-dioxide removal options: Potential impacts and side  
 effects** — ●ANDREAS OSCHLIES  
 SYCE 1.2 Tue 11:00–11:30 HSZ 01 **Climate Engineering through injection of aerosol particles into the  
 atmosphere: physical insights into the possibilities and risks** —  
 ●MARK LAWRENCE  
 SYCE 1.3 Tue 11:30–12:00 HSZ 01 **Geoengineering - will it change the climate game?** — ●TIMO GOESCHL  
 SYCE 1.4 Tue 12:00–12:30 HSZ 01 **The gamble with the climate - an experiment** — ●MANFRED MILINSKI

**Sessions**

SOE 1.1–1.1	Sun	16:00–18:00	HSZ 04	<b>Tutorial</b>
SOE 2.1–2.3	Mon	10:15–11:45	GÖR 226	<b>Focus Session: Swarm Intelligence</b>
SOE 3.1–3.2	Mon	12:00–12:30	GÖR 226	<b>Focus Session: Swarm Intelligence - Contributed Talks</b>
SOE 4.1–4.1	Mon	13:30–14:00	GÖR 226	<b>Special Announcement: Funding Opportunities</b>
SOE 5.1–5.2	Mon	14:00–15:00	GÖR 226	<b>Focus Session: GPU Computing (with DY)</b>
SOE 6.1–6.3	Mon	15:00–15:45	GÖR 226	<b>Focus Session: GPU Computing (with DY) - Contributed Talks</b>
SOE 7.1–7.3	Mon	16:00–16:45	GÖR 226	<b>Social Systems, Opinion and Group Dynamics I</b>
SOE 8.1–8.2	Mon	17:00–18:30	HSZ 02	<b>Award Ceremony: Young Scientist Award for Socio- and Econophysics</b>
SOE 9.1–9.4	Tue	10:30–13:00	HSZ 01	<b>Joint Symposium SYCE: Foundations and Perspectives of Climate Engineering (with AKE, UP)</b>
SOE 10.1–10.4	Tue	13:30–15:30	GÖR 226	<b>Focus Session: Experimental Methods</b>
SOE 11.1–11.19	Tue	18:00–18:45	P2	<b>Poster Session</b>
SOE 12	Tue	18:45–19:30	GÖR 226	<b>Annual General Meeting of SOE</b>
SOE 13.1–13.1	Wed	10:15–10:45	GÖR 226	<b>Networks: From Topology to Dynamics I (with BP, DY)</b>
SOE 14.1–14.9	Wed	10:45–13:15	GÖR 226	<b>Networks: From Topology to Dynamics II (with BP, DY)</b>
SOE 15.1–15.5	Wed	14:00–15:15	GÖR 226	<b>Economic Models and Evolutionary Game Theory I (with BP, DY)</b>
SOE 16.1–16.6	Wed	15:30–17:00	GÖR 226	<b>Networks: From Topology to Dynamics III (with BP, DY)</b>
SOE 17.1–17.3	Wed	17:15–18:00	GÖR 226	<b>Socio-Economic Systems</b>
SOE 18.1–18.11	Thu	10:15–13:15	GÖR 226	<b>Financial Markets and Risk Management I</b>
SOE 19.1–19.4	Thu	14:00–15:00	GÖR 226	<b>Economic Models and Evolutionary Game Theory II (with BP, DY)</b>
SOE 20.1–20.8	Thu	15:00–17:15	GÖR 226	<b>Networks: From Topology to Dynamics IV (with BP, DY)</b>
SOE 21.1–21.3	Fri	10:15–11:00	GÖR 226	<b>Traffic Dynamics, Urban and Regional Systems</b>
SOE 22.1–22.6	Fri	11:15–12:45	GÖR 226	<b>Social Systems, Opinion and Group Dynamics II</b>

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

Tuesday March, 15 18:45–19:30 GÖR 226