

CSH External Faculty Meeting 2025

Agenda

We invite you to the External Faculty Meeting to present your latest ideas and scientific achievements. It would be particularly interesting if you reflect on the potential of your own scientific work for solving (real) challenges in social, socio-economic, environmental, political, and/or scientific contexts. It would be highly appreciated if you share your latest and most exciting work in a 10-minutes presentation incl. Q&A. The topic that we would like to discuss with you is: **Is complexity science necessary for quantitative social science?**

Sunday, June 15

- 05:00 pm Meeting point at Complexity Science Hub, [Metternichgasse 8, 1030 Vienna](#)
Joint travel to Heuriger with public transport (tickets will be organized by CSH)
- 06:00 pm [Heuriger zum Martin Sepp](#), Cobenzlgasse 34, 1190 Wien

Monday, June 16

- 08:30 am Breakfast / Coffee
- 09:00 am Welcome: Stefan Thurner | President Complexity Science Hub & Helga Nowotny | Prof em ETH Zurich & Chair CSH Science Advisory Board
- 09:15 am Session 1, Session Chair: Luciano Pietronero
1. Stefano Boccaletti: The transition to synchronization in networks of dynamical units
 2. Andrea Rapisarda: The role of complexity science in climate change: a case study of precipitation data in Sicily
 3. Francesca Tria: Urn models as a lens to understand complexity
 4. Markus Strohmaier: Large Language Models for the Economic and Social Sciences
 5. Joana Goncalves-Sa: An auditing system to study search engine bias and help inform policy implementation
 6. Gerhard Schmitt: Citizen Design Science
 7. Tiziana Di Matteo: An econophysics perspective
 8. Luis Bettencourt: Cities as Complex Systems: new foundations for (social) science and the power to change the world
- 10:45 am Coffee Break



11:00 am	Session 2, Session Chair: Karoline Wiesner
	<ol style="list-style-type: none">1. János Kertész: Complexity science approach to (economic) crime2. Kimmo Kaski: Complexity Data Science - "what-if" approach to Quantitative Social Science3. Matteo Marsili: Thou shalt love thy neighbour as thyself*: extending game theory to prosocial agents4. Luciano Pietronero: Economic Complexity and AI5. Masarah Paquet-Clouston: Complexity Science and Economic Crime6. Ruth Pfeiffer: Building and validating cancer risk prediction models for clinical and public health applications7. Vito Latora: Beyond Complex Networks8. Tamas Biro: Gintropy - Inequality measure with entropic features9. Yurij Holovatch: Ernst Ising's doctoral thesis one hundred years on
12:30 pm	Lunch Break
01:30 pm	Presentations of CSH teams
	<ol style="list-style-type: none">1. Neffke Frank CSH Faculty: Transforming Economies2. Galesic Mirta CSH Faculty: Collective Minds3. Peter Klimek CSH Faculty & Medical University of Vienna: Healthcare & Medicine4. Haslhofer Bernhard CSH Faculty: Digital Currency Ecosystems
03:00 pm	Coffee Break
03:30 pm	World Café
05:30 pm	End of day 1
06:00 pm	CSH Grill Party

Tuesday, June 17

08:30 am	Breakfast / Coffee
09:00 am	Session 3, Session Chair: Tiziana Di Matteo
	<ol style="list-style-type: none">1. Geoffrey B. West: Senescence, Mortality & Singularities from People to Planet2. Stefan Bornholdt: Mechanisms of collapse: A physicist's perspective3. Sergey Gavrillets: Spirals of silence, pluralistic ignorance, and cultural evolutionary mismatch4. Thomas Choi: Global Supply Networks: Fragility and Resilience5. Manfred Laubichler: Complexity in the Anthropocene6. Ljubisa Bojic: Simulating Human Behavior with LLM-Based Agents to Develop Diversified Recommender Systems for Societal Well-being7. Hildegard Meyer-Ortmanns: Why Complexity Science is needed for Socio-Economic and Environmental Applications8. Joshua Epstein: Generative and Inverse Generative Social Science: Agent Zero, the Rational Actor, and Beyond



10:45 am	Coffee Break
11:00 am	<p>Session 4: Matteo Marsili</p> <ol style="list-style-type: none">1. Constantino Tsallis: Mathematical infinity does not belong to natural sciences2. Jose Fernando Mendes: Unveiling collective behaviours: Swarmalators and oscillator transitions3. Henrik Jensen: The O’Keeffe-Einstein propositions and the Approach of Complexity Science as a Device for Revealing Sociological Mechanisms4. Karoline Wiesner: Political regime dynamics in the 20th century5. Christian Kühn: Adaptive Network Dynamics for the Social Sciences6. Rosario Mantegna: Financial data from clearing, settlement and custody7. Vittorio Loreto: Decoding proximity in urban environments8. Diego Rybski: Global Settlement Percolation
12:30 pm	Lunch Break
01:30 pm	<p>Presentations of CSH teams</p> <ol style="list-style-type: none">1. Rafael Prieto Curiel CSH Faculty: Human Migration2. Stefan Thurner CSH Faculty & President & Medical University of Vienna: Supply Chain Science3. Helga Nowotny Prof em ETH Zurich & Chair CSH Science Advisory Board: Vision & Strategy
02:30 pm	Coffee Break
03:00 pm	World Café
05:00 pm	End of Meeting