



# Workshop – Modelling Knowledge and Evolution of Science



## Lightning Talks

Tuesday, October 10

### BLOCK I: OPINION DYNAMICS & SOCIAL NETWORKS

*Lightning Talks from 14:30-16:30, Chair: Malte Vogl*

- **Network epistemology in practice**, Adrian Wüthrich, Technical University Berlin
- **The Roles of Scientific Contributions in the Transfer of Knowledge: Some Methodological Reflections**, Catherine Herfeld, Leibniz University Hannover
- **Self-organization & criticality in collective dynamics**, Pawel Romanczuk, Humboldt University Berlin

Wednesday, October 11

### BLOCK II: AGENT-BASED MODELLING

*Lightning Talks from 09:00-11:00, Chair: Bernardo Sousa Buarque*

- **Agent-based models for spreading processes in ancient times**, Natasa Conrad, Zuse Institute Berlin
- **Understanding Memory Mechanisms in the ABM of a Socio-technical System**, Gesine Steudle, Max Planck Institute of Geoanthropology, Jena
- **Multi-level network dynamics of behavioral contagion, social norms and social tipping in World-Earth system modelling**, Jonathan Donges, Potsdam Institute for Climate Impact Research

Thursday, October 12

### BLOCK III: TIME SERIES ANALYSIS & COMPLEX SYSTEMS

*Lightning Talks from 09:00-11:00, Chair: Malte Vogl*

- **Long-term knowledge construction and connectivity: From Hunter-gatherers' cultural cumulation to scientific evolution**, Sergi Lozano, University of Barcelona
- **Networks and Multiplexes from Time Series. An example from financial markets**, Dimitri Marinelli, University of Barcelona
- **Force-directed layouts, community detection and dynamics latent space models**, Eckehard Olbrich, Max Planck Institute for Mathematics in the Sciences, Leipzig

### BLOCK IV: LANGUAGE MODELLING

*Lightning Talks from 13:30-15:30, Chair: Raphael Schlattmann*

- **impresso - Media Monitoring of the Past II. Beyond Borders: Connecting Historical Newspapers and Radio**, Marten Düring, University of Luxembourg
- **Language modeling and the possibilities for the history of science**, Guillermo Restrepo, Max Planck Institute for Mathematics in the Sciences, Leipzig
- **Modeling variation and change in scientific English over 300+ years from a communicative perspective**, Stefania Degaetano-Ortlieb, Saarland University

Friday, October 13

### BLOCK V: ONTOLOGIES

*Lightning Talks from 09:00-11:00, Chair: Aleksandra Kaye*

- **Unraveling Romantic „Geselligkeit“: Modeling Knowledge Transfer in Early Romanticism**, Elena Suárez Cronauer, Academy of Sciences and Literature, Mainz
- **An Ontology of Bias? Observations on “Cultural Heritage Filters” in Aggregated Epistolary Metadata**, Ilona Pikkanen, Finnish Literature Society
- **Mental models as ontologies in the history of science: the case of general relativity**, Roberto Lalli, Politecnico di Torino