



Supply Chains: A Complex System Perspective

Satellite Event at the [Conference on Complex Systems 2025 Siena, Italy](#)

When: Wednesday 3rd of September, 09:45 – 12:15

Where: [Conference venue](#) ROOM 16

Website: complexity.rocks

Introduction

09:45 – 09:50 **Opening** (5 min)

Giacomo Vaccario, ETH Zurich, CH

09:50 – 10:20 **Reconstructing firm-level input-output networks from partial information** (30 min)

Andrea Bacilleri, Institute for New Economic Thinking, UK

1: Sustainability and its unintended consequences

10:20 – 10:40 **Firm-level supply chains to minimize unemployment and economic losses in rapid decarbonization scenarios** (20 min)

Johannes Stangl, Complexity Science Hub Vienna, AU

10:40 – 11:00 **On CiRL for Circular Intelligent Networks** (5 min)

Federico Zocco, University of Siena, IT

Unveiling Hidden Risk: A Synthetic Network Perspective on EU Supply Chain Regulation (5 min)

Jan Hurt, Supply Chain Intelligence Institute Austria, AU

Discussion (10 min)

11:00 – 11:30 **Coffee break** (30 min)

2: Robustness, Adaption and Resilience of Supply Chains

11:30 – 11:50 **Supply chain network rewiring dynamics at the firm-level** (20 min)

Tobias Reisch, Swiss Economic Institute, CH

11:50 – 12:10 **Systemic Risk in Critical Raw Material Value Chains** (5 min)

Sophia Baum, Complexity Science Hub, AU

Graph-Based Embeddings of Production Networks for Analyzing Firm Resilience (5 min)

Giorgos Morakis, IMT School for Advanced Studies Lucca, IT

Discussion (10 min)

3: Quantifying Supply Chains

12:10 – 12:30 **Quantifying the complexity of inter-firm credit networks** (5 min)

Anahí Rodríguez-Martínez, University College London, UK

Guaranteed under failure cost flow analysis for supply chains (5 min)

Ivan Samoylenko, Moscow Institute of Physics and Technology, RU

Discussion (10 min)

Closing

12:30 – 12:45 **Closing Remarks** (15 min)

Giacomo Vaccario, ETH Zurich, CH

[Follow up workshop in working groups](#)

14:45 – 16:15 **A Complex System Perspective On Supply Chains** (90 min)