



ERC TechEvo UCD & CSH Workshop

Mapping the Evolution and Geography of Collective Knowledge

October 16-19, 2022.

COMPLEXITY SCIENCE HUB VIENNA
PALAIS STROZZI
JOSEFSTÄDTER STREET 39
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Technology Evolution in Regional Economies

ERC #715631 – TechEvo



ABOUT THE WORKSHOP

The expansion of collective knowledge, i.e., of knowledge that is not just held by individuals but that can be aggregated across individuals, entities and spatial units, has been the driving force behind increased prosperity and is probably our best tool to fight the unintended consequences thereof. Scholars have debated the role of knowledge in the economy for decades, if not longer. Recently, machine learning and natural language processing has started helping to create large-scale datasets that describe not just the quantity, but also the contents of patents, scientific publications, workers' skills, educational tracks, corporate product portfolios and so on, in ways that were unimaginable just five years ago. Nevertheless, these often high-dimensional and multi-scalar descriptions of knowledge held by individuals, teams, organizations or even countries often are hard to translate into the desired and more comprehensible low-dimensional concepts that our theoretical models rely on. As a consequence, empirical research either struggles by trying to squeeze the richness of the data into the narrow categories of current theories or gets stuck in descriptive analyses that do not generate a deeper understanding of the subject matter. Because collective knowledge is studied across fields, this problem is shared among multiple disciplines. In this workshop we therefore want to bring together scholars who study collective knowledge in the broad sense in management, economics, economic geography, innovation and related fields to take stock of the state of the art and sketch an agenda for future research.

Organizers

Frank Neffke, Complexity Science Hub Vienna

Dieter F. Kogler, Spatial Dynamics Lab, University College Dublin





Agenda

Monday, October 17 (Lecture hall)

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| 08:45 - 9:00 | Coffee/Tea + Welcome |
| 9:00 - 11:00 | Collective Knowledge - Challenges and Research Outlook <i>Maria Savona, University of Gothenburg</i> <i>Gerald Silverberg, UNU-MERIT & IIASA</i> |
| 11:00 - 11:30 | Coffee/ Tea Break |
| 11:30 - 12:00 | Lightning talks |
| 12:00 - 13:00 | Lunch |
| 13:00 - 15:00 | Network Approaches to Collective Knowledge <i>Neave O'Clery, University College London</i> <i>Keungoui Kim, School of Applied Artificial Intelligence</i> <i>Handong Global University</i> <i>Changjun Lee, Hanyang University</i> <i>Dieter F. Kogler, Spatial Dynamics Lab, University College Dublin</i> |
| 15:00-15:30 | Coffee break |
| 15:30-16:30 | Lightning talks |
| 16:30-17:30 | Breakout session (E05 & 201) |
| 17:30-18:30 | Discussion (rapporteur) |
| 18:30 | End Of Day 1 |





Tuesday, October 18 (Salon)

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| 8:45 - 9:00 | Coffee/ Tea Break |
| 9:00 - 11:00 | Firms' Spatial Strategies Mercedes Delgado, Copenhagen Business School & Massachusetts Institute of Technology Rikard Eriksson, Umeå University |
| 11:00 - 11:30 | Coffee/ Tea Break |
| 11:30 - 12:00 | Lightning talks |
| 12:00 - 13:00 | Lunch |
| 13:00 - 15:00 | Machine Learning Skills and Tasks Lingfei Wu, University of Pittsburgh Daniel Rock, Wharton School of the University of Pennsylvania |
| 15:00 -15:30 | Coffee break |
| 15:30 - 16:30 | Breakout session (255 & 201) |
| 16:30 -17:30 | Discussion (rapporteur) |
| 17:30 | End of day 2 |





Wednesday, October 19 (Lecture Hall)

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| 8:45 - 9:00 | Coffee/ Tea Break |
| 9:00 -11:00 | Collective Knowledge & Long-Run Transformation: Martin Henning, University of Gothenburg Frank Neffke, Complexity Science Hub Vienna |
| 11:00 - 11:30 | Coffee/ Tea Break |
| 11:30 - 12:30 | Breakout session (E05) |
| 12:30 - 13:30 | Discussion (rapporteur) + closing |
| 13:30 | End of workshop |

ABOUT THE COMPLEXITY SCIENCE HUB VIENNA

The objective of CSH is to host, educate, and inspire complex systems scientists who are dedicated to collect, handle, aggregate, and make sense of big data in ways that are directly valuable for science and society. Focus areas include smart cities, innovation dynamics, medical, social, ecological, and economic systems. CSH is a joint initiative of the AIT Austrian Institute of Technology, Austrian Chamber of Commerce, Central European University CEU, Graz University of Technology, International Institute for Applied Systems Analysis IIASA, Medical University of Vienna, University of Continuing Education Krems, TU Wien, University of Veterinary Medicine Vienna, and the Vienna University of Economics and Business.

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