

## Call for Abstracts: Workshop on Model Transfer and its Challenges in Science

Location: Leibniz University of Hannover, Germany

Date: November 30 and December 1, 2023

Organizer: Catherine Herfeld (University of Hannover)

The transfer of models across scientific domains is a common practice in contemporary science. Models developed in one domain are used in others to study sometimes similar but often also fundamentally different problems. For instance, engineering models are applied in synthetic biology, models from complexity science and physics address problems in mathematical finance, game theoretic models are used not only throughout the social and behavioral sciences but also extend into evolutionary biology, and psychological models have been transferred into microeconomics, giving rise to behavioral economics. This phenomenon of model transfer raises a multitude of questions regarding the nature, construction, and application of models, our understanding of whether, how, and what models represent, the demarcation of scientific disciplines, and the nature of progress in science. Yet, despite their significance, discussions surrounding these questions remain fragmented. Moreover, those discussions often lack connection to broader ongoing debates within the history and philosophy of science, ranging from issues arising in the philosophy of modeling to questions about interdisciplinarity, application-driven research, and even the public perception of science.

This workshop aims to systematize and advance the ongoing discussions surrounding model transfer. It seeks to identify and debate the key questions, existing findings, and open issues in those discussions and connect them to related debates in history and philosophy of science more generally. To improve our understanding of the phenomenon of model transfer, we invite contributions that address questions regarding the various forms that model transfer can take, the nature of the object transferred, the criteria for successful model transfer, and the ways in which scientific progress should be understood in light of such model transfers. We also invite contributions that study the challenges of model transfer and how such transfers can hamper scientific progress. Submissions are welcome from researchers across all fields who are interested in exploring those and related issues either historically, systematically or by using empirical methods. As such, this workshop will outline a clear agenda for philosophical enquiry and empirical research on the nature, complexities and challenges of model transfer in science.

### Our keynote speakers and talks are:

- **Axel Gelfert** (Technical University of Berlin): *TBA*
- **Mary Morgan** (London School of Economics): *What Travels in, or With, a Model?*
- **Tarja Knuuttila** (University of Vienna), and **Andrea Loettgers** (University of Vienna): *Transdisciplinary Model Templates: Application and Entanglement*

We also have the following invited speakers presenting papers: **Karim Baraghith** (Leibniz University Hannover) \*\*\* **Muriel Dal Pont Legrand** (Université Côte D'Azur) \*\*\* **Till Grüne-Yanoff** (Stockholm University) \*\*\* **Wybo Houkes** (TU Eindhoven) \*\*\* **Jaakko Kuorikoski** (University of Helsinki) \*\*\* **Chia-Hua Lin** (Fairfield University) \*\*\* **Nicola Moessner** (Leibniz University Hannover) \*\*\* **Maximilian Noichl** (Utrecht University) \*\*\* **Francesco Sergi** (University of Paris Est Créteil) \*\*\* **Peter Tan** (Fordam University) \*\*\* **Alexandre Truc** (CNRS, Université Côte D'Azur) \*\*\*

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