



## **PHYSICS COLLOQUIUM and GET-TOGETHER**

*Speaker:* **Jun.-Prof. Enno Fischer**  
Juniorprofessur für Wissenschaftstheorie,  
Philosophische Fakultät,  
TU Dresden



*Topic:* **A Philosopher's Look at Guiding Principles in Physics**

*Time and* Tuesday, May 6, 2025, **2:50 pm** – hybrid event

*place:* **The colloquium will be held in REC/C213.**

Online participation possible:

Zoom-Meeting: Meeting-ID: 631 3817 8900 / passcode: PC-SoSe25

<https://tu-dresden.zoom-x.de/j/63138178900?pwd=TIuGawPz1dtDA6VzO2N1Xdqql7bE6b.1>

*Host:* Jonathan Moeller, Fachschaftsrat Physik

*Abstract:* Physics often employs 'guiding principles' in theory development and for the planning of experiments. What are guiding principles, and are there general criteria for good ones? In this talk I present an account of such principles looking at their heuristic role. I suggest a distinction between two modes of employing scientific principles. Principles of nature make descriptive claims about objects of inquiry, and principles of epistemic action give directives for further research. If a principle is employed as a guiding principle, then its use integrates both modes of employment: guiding principles imply descriptive claims, and they provide directives for further research. By discussing the naturalness principle from high-energy physics as an example, I explore the consequences for understanding and evaluating current guiding principles in physics.

*Bio:* Enno Fischer is Junior Professor for Philosophy of Science at TU Dresden. After studying physics and philosophy in Göttingen and Cambridge (UK), he received his PhD in 2020 in Hannover. He held postdoctoral positions in Wuppertal (DFG project "The Epistemology of the Large Hadron Collider") and Bochum (History and Philosophy of Science) before coming to Dresden in 2024. His current research interests include the philosophy of particle physics, theories of causation, and the philosophy of experimentation.

### **Get-Together:**

The colloquium will be followed directly by a Get-Together with Jun.-Prof. Enno Fischer in REC/B101 (around 4:00 p.m.). All students and staff are invited to talk to the speaker and discuss perspectives on the academic career, work-life balance and the professional life as a scientist.

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