



PHYSIKALISCHES KOLLOQUIUM

Referentin: **Prof. Dr. Michela Massimi**
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The University of Edinburgh
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Thema: **The explanatory role of dark matter**

Zeit und Ort: Dienstag, 2.2.2021, 16:40 Uhr
Online-Meeting: BBB / Zugang mit Browser (Firefox oder Chrome)
- Teilnehmende mit ZIH-Login über folgenden Link:
<https://selfservice.zih.tu-dresden.de/link.php?m=68757&p=2319ec33>
- Teilnehmende ohne Hochschul-Login über folgenden Link:
<https://selfservice.zih.tu-dresden.de/link.php?m=68757&p=ff7a8eff>

Leiterin: Dr. Uta Bilow

Kurzfassung: In this talk I ask two philosophical questions: when is a scientific entity explanatory? And under what conditions do we have reasons for believing in the scientific entity on the ground of its explanatory role? I look at dark matter and the history of dark matter searches and tease out different possible ways in which these questions can be (and have been) answered depending on how dark matter has featured in the explanation of a number of phenomena, from galaxies' rotation curves to galaxy clusters and the growth of large scale structure. In so doing, I discuss the respective roles, problems, and promises of causal explanations and statistical explanations in the case of dark matter.

Biographie: Michela Massimi is Professor of Philosophy of Science at the University of Edinburgh, Scotland, UK. She works in the area of history and philosophy of modern physics and has extensively written on topics in the history and philosophy of early quantum theory, particle physics and contemporary cosmology. She has been the PI of an ERC Consolidator Grant entitled "Perspectival realism. Science, knowledge and truth from a human vantage point" (2016-2020), see <https://www.perspectivalrealism.org/> and she is the President-Elect of the American Philosophy of Science Association (PSA). More info can be found on her website: <https://www.michelamassimi.com/>.

