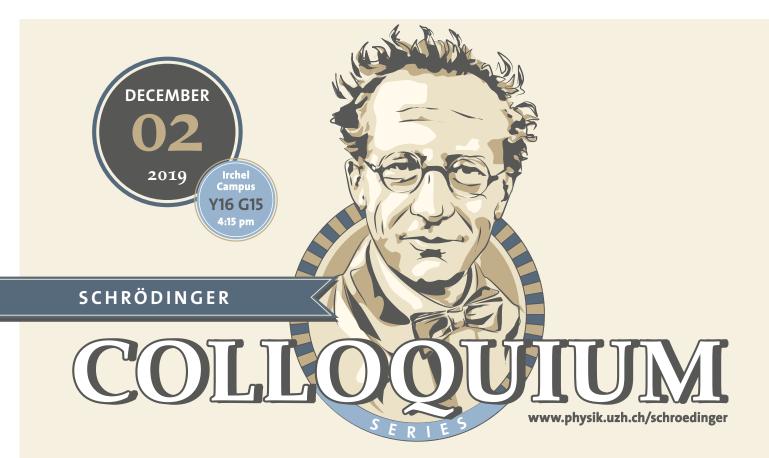


Faculty of Science



PROF. MICHELA MASSIMI The University of Edinburgh The explanatory role of dark matter

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.



A series of special physics colloquia in honor of Erwin Schrödinger, who was a professor at UZH from 1921 – 1927. Lectures are intended for a broad audience from the Faculty of Science, aiming at experts and non-experts.