

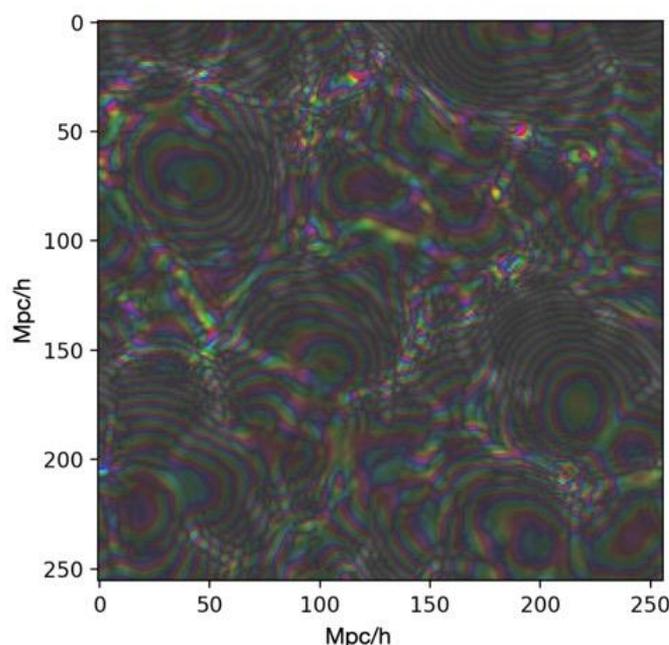
Colloquium di Matematica, Fisica e Informatica**Cora Uhlemann**

Bielefeld University, Germany

terrà un seminario dal titolo

The Skeleton of our Universe**Abstract:**

Cosmology has evolved from a speculative field into a precision science using large sky surveys as a laboratory for fundamental physics. In this talk, I will take you on a journey through our Universe across the largest scales and the longest times. We will discover the large-scale skeleton of matter behind the cosmic web of structure observed in galaxy surveys. I will explain how our Universe evolved from a nearly uniform initial state into today's cosmos with rich structure from stars to galaxies and beyond. We will see how the tug of war between the gravity of dark matter and the expansion by dark energy is recorded in the cosmic large-scale structure. I will explain why the dark matter mass remains one of the least constrained physical parameters, ranging from ultralight wave-like candidates to massive particles. I will illustrate how wave dark matter creates interference effects that dress the cosmic web and can help us to go beyond the average of standard forward models. This will enable us to put our physical model of the Universe and its ingredients to the ultimate test.



12/3/2026, ore 16:30, Aula Newton (plesso fisica)