



LUDWIG-
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MÜNCHEN

ARNOLD SOMMERFELD
CENTER FOR THEORETICAL PHYSICS



Arnold Sommerfeld Lecture Series

Professor Thibault Damour

IHES, France

Public Lecture:

100 Years of General Relativity

In November 2015, Albert Einstein finalized a new theory of gravitation, General Relativity (GR), which describes gravitation as a deformation of the structure of space-time. It took many years of conceptual deepening and observational discoveries to fully grasp several of the most novel predictions of GR (gravitational waves, black holes, cosmological expansion). GR is the current standard model for the gravitational interaction, and plays a crucial role in the description of many physical systems: solar system, neutron stars, binary pulsars, galaxies, black holes, cosmology. For many years, GR was considered as being completely separate from the (quantum) description of the other interactions. However, several theoretical frameworks (string theory, supergravity) point towards a key role of GR in the search for a unified description of physics. GR has passed with flying colors all current experimental tests, but some puzzles remain unanswered.

**Tuesday, May 10, 2022, 17:15 h, Room B 052, Theresienstr. 39, LMU
and via Zoom**

Slava Mukhanov and Dieter Lüst