PHYSIKALISCHES KOLLOQUIUM

des Fachbereichs Physik
der Johann Wolfgang Goethe-Universität Frankfurt

Mittwoch, den 05.02.2020, 16 Uhr c.t.
Großer Hörsaal, Raum _0.111,
Max-von-Laue-Str. 1

Prof. Dr. Aleksi Kurkela

CERN Theoretical Physics Department

"QCD in the cores of neutron stars"

Neutron stars are the densest astrophysical objects in the universe. The cores of neutron stars reach densities that are as high as those realized in ultrarelativistic heavy-ion collisions where ordinary nuclear matter melts into a new phase of matter: quark matter. This naturally raises the question: does quark matter also exist inside neutron stars? In my talk, I describe how recent advancements in the theory of superdense matter and in observations of neutron stars - such as the LIGO/Virgo detection of gravitational waves arising from merger of two neutron stars - can inform us about what lies in the centers of neutron stars.

Die Dozenten der Physik

local host: Prof. Dr. Luciano Rezzolla rezzolla@itp.uni-frankfurt.de