



# Habilitandenkolloquium

*Dienstag, 22. November 2016, 15:15 Uhr*

*Dr. Jan Steinhoff*

Max-Planck-Institut für Gravitationsphysik

## *“Gravitational Waves, Tides, and Twisted Spacetime“*

Gravitational waves were predicted by Einstein 100 years ago. Einstein believed that their effect in realistic situations is too small to ever be measured. In later years he even doubted they exist at all. However, observations of the orbital decay of binary pulsars showed that they do exist. About one year ago, the Laser Interferometer Gravitational-Wave Observatory (LIGO) measured a coincident interaction of a gravitational wave, emitted from a binary black hole merger, with its two interferometers. We discuss the prospects of these observatories for astrophysics and fundamental physics. Of particular interest are tidal deformations of neutron stars and gravito-magnetic effects which twist the spacetime.

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