universität wien

Fakultät für Mathematik

EINLADUNG

Mathematisches Kolloquium

und

Junior Kolloquium

Mittwoch, 25. April 2018

Sky Lounge

Jiri Podolsky (University of Prague)

14:15 Uhr – Junior Kolloquium

„Gravitational waves: 2017 Nobel Prize in Physics “

15.45 Uhr – Kaffeepause

16:15 Uhr – Vortrag

„Gravitational waves: 2017 Nobel Prize in Physics “

Anschließend vinum cum pane

Vortrag:

„Gravitational waves: 2017 Nobel Prize in Physics”

Abstract:

On September 14, 2015, two advanced LIGO interferometers in America detected a signal denoted as GW150914. For the first time in the history of physics and astronomy, gravitational waves were observed. The theoretical existence of such waves was predicted 100 years ago by Albert Einstein as a unique consequence of his (newly born) dynamical gravity theory, general relativity. Quite surprisingly, the signal GW150914 was so loud that it could be, without any doubts, interpreted as a result of collision and merge of two massive black holes that happened about one billion years ago in a deep space. In the colloquium we will describe this landmark event and construction of the sophisticated LIGO detectors, for which the 2017 Nobel Prize was awarded to Reiner Weiss, Barry Barish and Kip Thorne. Some other historical relations will be mentioned, as well as further gravitational waves found since the first discovery. We will also briefly look into the near future of this new field of gravitational-wave and multi-messenger astronomy.

Roland Steinbauer

Christian Krattenthaler