Fakultät Mathematik und Physik • Eckerstr. 1 • 79104 Freiburg

79104 Freiburg, den 05.07.2016
Eckerstr. 1
Tel. 0761/203-5534
Fax 0761/203-5535
dekanat@mathphys.uni-freiburg.de
www.mathphys.uni-freiburg.de

Einladung

zum wissenschaftlichen Vortrag gemäß § 12 der Habilitationsordnung

Dr. Anda Degeratu

„The mathematics behind LIGO Experiment's first ever detection of gravitational waves“

Donnerstag, 14. Juli 2016, 17:00 Uhr

HS II, Albertstr. 23 b

Prof. Dr. Sebastian Goette
Vorsitzender der Habilitationskommission

Abstract: On 11 February 2016 the LIGO and Vigo Collaborations announced the detection of gravitational waves. These gravitational waves were produced about 1.3 billion years ago from the inspiral and merger of a pair of black holes of 29 and 36 solar masses into a single one of 62 solar masses. The difference in their masses was transformed in gravitational radiation, which propagated through the spacetime as gravitational waves, to reach the Earth on 14 September 2015. These observations demonstrate the existence of binary stellar-mass black hole systems. They also provide the first direct detection of gravitational waves and the first observation of a binary black hole merger.

In this talk I will present the mathematics behind this recent detection of gravitational waves, whose existence was predicted by Einstein in 1916, one year after he formulated his equation for General Relativity.

(2) Der/Die Vorsitzende der Habilitationskommission lädt zum wissenschaftlichen Vortrag vor dem Habilitationsausschuss ein. Der Vortrag ist **fakultätsöffentlich**.

(3) Im Anschluss an den Vortrag findet unter Leitung des/der Vorsitzenden der Habilitationskommission oder des Dekans/der Dekanin oder eines Prodekans/einer Prodekanin eine Aussprache mit dem Bewerber/der Bewerberin statt.