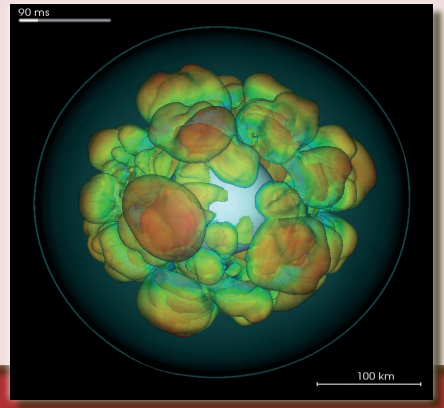
International Max Planck Research School for Astronomy & Cosmic Physics at the University of Heidelberg (IMPRS-HD)

Heidelberg Summer School 2017

September 11 – 15, 2017

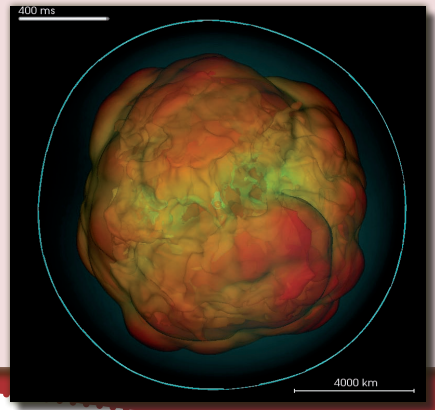
Compact Objects & Gravitational Waves



IMPRS Heidelberg* invites to the 12th Heidelberg Summer School. Relativistic astrophysics and its objects, compact stars and black holes, is one of the most fascinating topics in astronomy. The recent discovery of gravitational waves has even boosted interest in this field.

The school will look at the principles of relativistic astrophysics and the numerical methods applied. We will discuss the properties of compact objects, how they form, how they are structured, and how they look like.

Topics to be covered include: relativistic hydrodynamics & numerical relativity, gravitational waves, core collapse supernovae & the formation of compact objects, the structure of neutron stars & the neutron star equation of state, compact object binaries & neutron-star mergers.



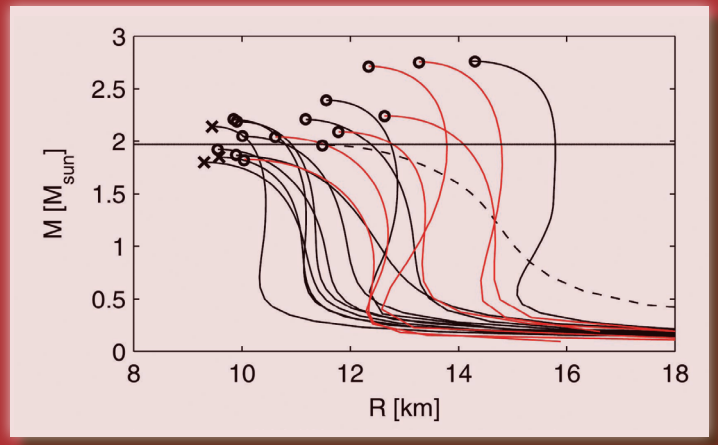
$$R_{\mu\nu} - \frac{1}{2}Rg_{\mu\nu} = \frac{8\pi G}{c^4}T_{\mu\nu}$$

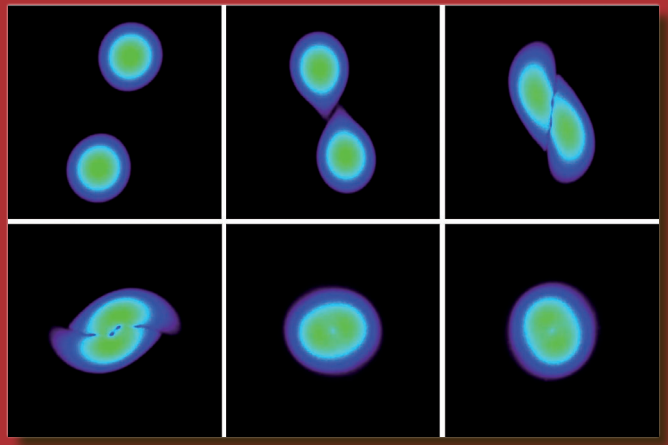
$$\bar{h}_{ij}(t,R) = \frac{2G}{c^4 R}Q_{ij}(t - R/c)$$

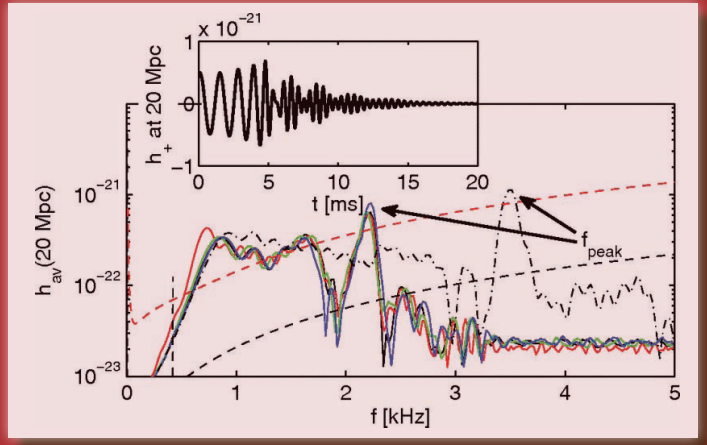
Invited key lecturers:

Thomas Baumgarte (Bowdoin College, Brunswick)
Tobias Fischer (University of Wroclaw)
Paulo Freire (Max Planck Institute for Radioastronomy, Bonn)
Ewald Müller (Max Planck Institute for Astrophysics, Garching)
Nikolaos Stergioulas (Aristotle University of Thessaloniki)

Deadline **for registration is July 10, 2017 *** Information & registration: www.imprs-hd.mpg.de/Summer-School *** Contact: imprs-hd @ mpia.de**







*) IMPRS-HD is an independent part of the Heidelberg Graduate School for Fundamental Physics, HGSFP

Credits: A. Bauswein et al. (2011, 2014, 2017); Th. Janka et al (2015); NASA/ESA