



Computational Relativistic Astrophysics

22-24 October 2009

Relativistic Astrophysics is experiencing an explosion in the quality of data and the level of sophistication of the modeling. Broadly defined, relativistic astrophysics studies phenomena for which the effects of Einstein's theory of relativity play a crucial role in determining the observables.

This conference will focus on situations where strong-field gravity plays an important role, and where anticipated gravitational wave and electromagnetic observations will benefit from a solid theoretical understanding of the system, in particular binary compact-object mergers, black hole accretion disks, and supernovae. The objective is to showcase the current state of the art in the computational modeling of these phenomena, highlight outstanding issues, and foster lively discussion to address these issues.

A tentative outline is:

- Thursday, October 22: Overview of gravitational wave astronomy and gravitational wave detectors, binary black hole mergers
- Friday, October 23: Binary neutron star and black hole/neutron star mergers
- Saturday, October 24: Accretion disks, collapsars, jets, and supernovae.

For more information, and to register, please visit:

<http://www.physics.princeton.edu/pcts/relastro/relastro.html>

Program Organizers: Adam Burrows, Frans Pretorius, Anatoly Spitkovsky, Branson Stephens, Jim Stone

Speakers

John Baker, NASA
Duncan Brown, Syracuse University
Manuela Campanelli, Rochester Institute
Technology
Matt Duez, Cornell University
Serguei Komissarov, Leeds, UK
Luis Lehner, Perimeter Institute
Yuk Tung Liu, University of Illinois at Urbana-
Champaign
Andrew MacFadyen, New York University

Scott Noble, Rochester Institute Technology
Christian Ott, Caltech
Denis Pollney, Max Planck Institute for
Gravitational Physics
Luciano Rezzolla, Max Planck Institute for
Gravitational Physics
Stu Shapiro, University of Illinois at Urbana-
Champaign
Masaru Shibata, Kyoto University, Tokyo
Saul Teukolsky, Cornell University

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