GR 8 Gravitationswellenastronomie

Zeit: Samstag 08:30–11:15 Raum: TU BH262

Hauptvortrag GR 8.1 Sa 08:30 TU BH262

Angular Momentum in General Relativity — •Gernot Neugebauer — Theoretisch-Physikalisches Institut, Friedrich-Schiller-Universiät, Jena, Max-Wien-Platz 1, 07743 Jena

Spin phenomena play an important role in the analysis of astrophysical sources of gravitational radiation (neutron stars, binaries, black holes). This talk is meant to review some recent work on the spin-spin interaction of black holes, (parametric) collapse phenomena, and collisions of rotating disks.

Hauptvortrag GR 8.2 Sa 09:15 TU BH262

Exploring the mathematical structure of gravitational fields — •Helmut Friedrich — Max-Planck-Institut für Gravitationsphysik, Albert-Einstein-Institut, Am Mühlenberg 1, 14476 Potsdam

Exploring the mathematical structure of gravitational fields, described in general relativity by solutions to Einstein's field equations, has been a central activity in the field since the beginning of theory. In spite of an impressive progress and a number of surprises there are still important questions to be answered. We discuss the development and the basic open problems of mathematical relativity and review some of the more recent results.

Hauptvortrag GR 8.3 Sa 10:30 TU BH262

Gravitational waves — •Bernard Schutz — Max-Planck-Institut für Gravitationsphysik, Albert-Einstein-Institut, Am Mühlenberg 1, D-14476 Golm, Germany