

## Schedule of Talks

## “4th Central European Relativity Seminar”

organized by

Lars Andersson (AEI Golm), Robert Beig (U Vienna),  
Piotr Bizoń (Jagiellonian U, Cracow), Piotr Chruściel (U Vienna), Helmut Friedrich (AEI  
Golm)

February 27 - March 1, 2014

## • Thursday, February 27, 2014

14:00 – 14:20 **Matyas Vasuth***Spin-orbit effects in the recoil of binary systems*14:20 – 14:40 **Robert Svarc***Kundt spacetimes: algebraic structure and geodesic deviation*14:40 – 15:00 **Sebastian Moeckel***Solutions associated with the point symmetries of the hyperbolic Ernst equation*15:00 – 15:30 *tea/coffee break*15:30 – 15:50 **Jedrzej Swiezewski***Geometrical observables for General Relativity related to distances and angles*15:50 – 16:10 **Patryk Mach***Accretion in spacetimes with the cosmological constant*16:10 – 16:30 **Clemens Sämann***On geodesics in impulsive gravitational waves*16:30 – 17:00 *break*17:00 – 17:20 **Andras Laszlo***Spectral methods in time evolution of non-linear PDEs and application in study of superradiance*17:20 – 17:40 **Martin Scholtz***On the existence and properties of helically symmetric systems*

## • Friday, February 28, 2014

09:40 – 10:00 **David Fajman***Future complete spacetimes with spherical spacelike topology in 2+1- dimensions*10:00 – 10:20 **Anna Sakovich***A Jang equation approach to positive mass theorem for asymptotically hyperbolic initial data*10:20 – 10:40 **Tim Paetz***The mass of light cones*

10:40 – 11:00 **Klaus Kroencke**

*Stability of Einstein Manifolds*

11:00 – 11:30 *tea/coffee break*

11:30 – 12:00 **Cecile Huneau**

*Vacuum constraint equations for asymptotically flat space-times with a translational Killing field.*

12:00 – 12:30 **Oliver Rinne**

*Solitons on hyperboloidal slices*

12:30 – 14:00 *lunch break*

14:00 – 14:20 **Michal Kahl**

*Wave maps on a wormhole*

14:20 – 14:40 **Roger Tagne**

*On the characteristic initial value problem for nonlinear symmetric hyperbolic systems with application to semi-linear wave equations on a Lorentzian manifold*

14:40 – 15:00 **Jinhua Wang**

*A Large Data Regime for non-linear Wave Equations*

15:00 – 15:30 *tea/coffee break*

15:30 – 15:50 **Thomas Bäckdahl**

*Symmetry operators and conserved currents*

15:50 – 16:10 **Annegret Burtscher**

*Self-gravitating collapse of compressible matter under spherical symmetry*

16:10 – 16:30 **Maciej Maliborski**

*On the (in)stability of asymptotically anti-de Sitter spacetimes*

16:30 – 16:50 **Martin Reiris**

*Instability of the extreme Kerr-Newman black-holes*

Evening session to mark Bobby Beig's retirement:

17:30 – 18:00 **Helmut Friedrich**

*Afloat in space, time and water*

18:00 – 18:30 **Robert Beig**

*Upstairs and downstairs: my life with tensors*

19:15 Heurigen Evening (place to be announced)

• **Saturday, March 1, 2014**

10:00 – 10:20 **David Hilditch**

*Recent progress in the numerical treatment of collapsing gravitational waves*

10:20 – 10:40 **Mikołaj Korzysński**

*Backreaction and continuum limit in a closed universe filled with black holes*

10:40 – 11:00 **Sebastian Szybka**

*Inhomogeneity effect in Wainwright-Marshman space-times*

11:00 – 11:30 *tea/coffee break*

11:30 – 11:50 **Gabor Zsolt Toth**

*Test of the weak cosmic censorship conjecture with a charged scalar field and dyonic Kerr-Newman black holes*

11:50 – 12:10 **Rodrigo Panosso Macedo**

*Physical properties of perturbed Kerr black holes in ACMC slices*

12:10 – 12:30 **Norbert Bodendorfer**

*Loop quantum gravity in higher dimensions*

12:30 – 12:50 **Daniel Barta**

*Dispersion of gravitational waves in cold spherical interstellar medium*

**All lectures take place in the ESI Boltzmann Lecture Hall**