Programme on
“Geometry and Relativity”
July 17 – September 8, 2017
organized by
Robert Beig (U Vienna), Piotr T. Chruściel (U Vienna), Michael Eichmair (U Vienna), Gregory
Galloway (U Miami), Richard Schoen (UC, Irvine), local organization: Tim-Torben Paetz (U
Vienna)

Workshop: Advances in General Relativity, August 28 – September 1, 2017

• Monday, August 28, 2017
  08:30 – 09:30 Registration
  09:30 – 10:30 András Vasy (Stanford U)
  The stability of Kerr-de Sitter black holes
  10:30 – 11:00 Coffee / Tea Break
  11:00 – 12:00 Otis Chodosh (Cambridge U)
  Global uniqueness for CMC foliations of asymptotically flat 3-manifolds
  12:00 – 14:00 Lunch Break
  14:00 – 15:00 Cécile Huneau (U Grenoble)
  High frequency back reaction for the Einstein equations
  15:00 – 15:30 Coffee / Tea Break
  15:30 – 16:30 Roger Penrose (Oxford U)
  The equations of conformal cyclic cosmology: implications as to the nature of dark matter, its decay, and possible observational tests

• Tuesday, August 29, 2017
  09:00 – 10:00 Piotr Bizón (Jagiellonian U, Cracow)
  From AdS to BEC
  10:00 – 10:30 Coffee / Tea Break
  10:30 – 11:30 Anna Sakovich (Uppsala U)
  On geometric foliations and center of mass for isolated systems in general relativity
  11:40 – 12:40 Beverly Berger (Oakland U)
  When black holes collide: a new window on the universe
  12:40 – 14:15 Lunch Break
  14:15 – 15:15 Harvey Reall (Cambridge U)
  On the local well-posedness of Lovelock and Horndeski theories
  15:15 – 15:45 Coffee / Tea Break
  15:45 – 16:45 Georgios Moschidis (Princeton U)
  A proof of the instability of AdS spacetime for the Einstein-null dust system
Wednesday, August 30, 2017

09:00 – 10:00 Yakov Shlapentokh-Rothman (Princeton U)
The asymptotically self-similar regime for the Einstein vacuum equations

10:00 – 10:30 Coffee / Tea Break

10:30 – 11:30 Lorenzo Mazzieri (U Trento)
On the mass of static vacuum Einstein metrics with positive cosmological constant

11:40 – 12:40 Christos Mantoulidis (Stanford U)
Nonnegative scalar curvature fill-ins and quasi-local mass

Free Afternoon

Thursday, August 31, 2017

09:00 – 10:00 Carla Cederbaum (U Tübingen)
Rigidity properties of the Schwarzschild manifold in all dimensions

10:00 – 10:30 Coffee / Tea Break

10:30 – 11:30 Sebastiano Bernuzzi (U of Parma & INFN)
Modeling neutron star binaries and gravitational waves with numerical relativity

11:40 – 12:40 László Szabados (Budapest)
Gravity, as a classical regulator for the Higgs field, and the origin of rest masses and electric charge

12:40 – 14:15 Lunch Break

14:15 – 15:15 Lydia Bieri (U of Michigan)
Gravitational Radiation in Cosmological Spacetimes

15:15 – 15:45 Coffee / Tea Break

15:45 – 16:45 Ettore Minguzzi (U Firenze)
Causality theory for cone structures

Friday, September 1, 2017

09:00 – 10:00 Mihalis Dafermos (U Cambridge & Princeton)
Boundedness and polynomial decay for the Teukolsky equation on Kerr spacetimes

10:00 – 10:30 Coffee / Tea Break

10:30 – 11:30 Jan Sbierski (Cambridge U)
The wave equation in the interior of black holes

11:40 – 12:40 Thomas Bäckdahl (Golm)
Symmetries and conservation laws for linearized gravity

12:40 – 14:15 Lunch Break

14:15 – 15:15 Jérémie Szeftel (U Paris)
On the stability of black holes

15:15 – 15:45 Coffee / Tea Break

All talks take place at ESI, Boltzmann Lecture Hall, except the talks on Monday afternoon which will be held at the Lise Meitner Lecture Hall, 1st floor, Faculty of Physics, Strudlhofgasse 4, 1090 Vienna!