

Conference of the  
Thematic Programme on  
“Spectral Theory and Mathematical Relativity”

July 10 - 14, 2023

organized by

Piotr T. Chruściel (U of Vienna), Peter Hintz (ETH Zurich), Alexander Strohmaier (U Leeds)

• **Monday, July 10th, 2023**

09:30 – 10:00 **Registration and Welcome**

10:00 – 10:50 **Kasia Rejzner (U of York)**

*New proposal for renormalisation group equations on curved spacetimes*

11:00 – 11:50 **Robert Wald (U of Chicago)**

*Quantum Field Theory in Curved Spacetime*

12:00 – 14:00 **Lunch break**

14:00 – 14:50 **Michał Wrochna (Cergy Paris U.)**

*Low-energy obstructions to quantizing linearized gravity*

14:50 – 15:30 **Coffee break**

15:30 – 16:20 **Dean Baskin (TAMU, College Station)**

*The Feynman propagator for the wave equation with an inverse square potential*

• **Tuesday, July 11th, 2023**

09:00 – 09:50 **András Vasy (Stanford U)**

*The Feynman propagator and self-adjointness*

09:50 – 10:20 **Coffee break**

10:20 – 11:10 **Semyon Dyatlov (MIT, Cambridge)**

*Microlocal analysis of internal waves in 2D aquaria*

11:20 – 12:10 **Jeremy Louis Marzuola (U of North Carolina, Chapel Hill)**

*Spectral minimal partitions, nodal deficiency and the Dirichlet-to-Neumann map*

12:20 – 14:00 **Lunch break**

14:00 – 14:50 **Georgios Moschidis (EPFL, Lausanne)**

*Weak turbulence on Schwarzschild-AdS spacetime*

14:50 – 15:30 **Coffee break**

15:30 – 16:20 **Jonathan Luk (Stanford U)**

*Late time tail of waves on dynamic asymptotically flat spacetimes of odd space dimensions*

- **Wednesday, July 12th, 2023**

09:00 – 09:50 **Christian Bär (U of Potsdam)**  
*Survey on Index Theory on Lorentzian Manifolds*

09:50 – 10:20 **Coffee break**

10:20 – 11:10 **Stefan Czimek (U Leipzig)**  
*Obstruction-free gluing for the Einstein equations*

11:20 – 12:10 **Christoph Kehle (ETH Zürich)**  
*A small divisors instability at the Kerr-AdS Cauchy horizon*

– **Free afternoon**

18:30 – 22:00 **Conference Dinner**

- **Thursday, July 13th, 2023**

09:00 – 09:50 **Rita Teixeira da Costa (U Cambridge)**  
*The Teukolsky equation on Kerr in the full subextremal range  $|a| < M$*

09:50 – 10:20 **Coffee break**

10:20 – 11:10 **Claude Warnick (U Cambridge)**  
*Quasinormal modes of (near) extremal black holes*

11:20 – 12:10 **Zoe Wyatt (KCL, London)**  
*Global Stability of Spacetimes with Supersymmetric Compactifications*

12:20 – 14:00 **Lunch break**

14:00 – 14:50 **Claudio Dappiaggi (U Pavia)**  
*TBD*

14:50 – 15:30 **Coffee break**

15:30 – 16:20 **Jared Wunsch (Northwestern U Evanston)**  
*Wave propagation on rotating cosmic string backgrounds*

- **Friday, July 14th, 2023**

09:30 – 10:20 **Tanya Christiansen (U of Missouri, Columbia)**  
*Resolvent at low energy in two dimensions*

10:20 – 11:00 **Coffee break**

11:00 – 11:50 **Colin Guillarmou (U Paris-Saclay)**  
*Virasoro semi-groups and conformal blocks*

12:00 – 14:00 **Lunch break**

14:00 – 14:50 **Stefan Hollands (U Leipzig)**  
*Semi-classical analysis of strong cosmic censorship*

14:50 – 15:30 **Coffee break**

15:30 – 16:20 **Michael Eichmair (U Vienna)**  
*On the canonical geometric structure of initial data for the Einstein equations*

**All talks take place at ESI Boltzmann Lecture Hall!**

They also can be followed live online via the streaming link:

<https://esi.ustream.univie.ac.at/live/7f57b8b6-f65d-45a4-b68f-045bf77fab9>