

**Workshop 1 of the Thematic Programme on
“Nonlinear Waves and Relativity”**

May 13 - 17, 2024

organized by

**Roland Donninger (U of Vienna), David Fajman (U of Vienna),
Birgit Schörkhuber (U of Innsbruck)**

• **Monday, May 13th, 2024**

09:00 – 09:45 **Registration**

09:45 – 10:00 **Welcome**

10:00 – 11:00 **Daniel Tataru (UC, Berkeley)**

Global solutions for quasilinear Schroedinger flows

11:00 – 11:15 **Coffee Break**

11:15 – 12:15 **Sebastian Herr (Uni Bielefeld)**

Strichartz estimates and global well-posedness of the cubic NLS on the 2d torus

12:15 – 14:00 **Lunch Break**

14:00 – 15:00 **Mihaela Ifrim (U of Wisconsin-Madison)**

Modified scattering for the three dimensional Maxwell-Dirac system

15:00 – 15:15 **Coffee Break**

15:15 – 16:15 **Didier Pilod (U of Bergen)**

Finite point blowup for the critical generalized Korteweg-de Vries equation

• **Tuesday, May 14th, 2024**

10:00 – 11:00 **Herbert Koch (Uni Bonn)**

The Korteweg-de Vries hierarchy in rough function spaces

11:00 – 11:15 **Coffee Break**

11:15 – 12:15 **Raphaël Côte (IRMA, Strasbourg)**

Perturbation at blow up of self similar solution for mKdV

12:15 – 14:00 **Lunch Break**

14:00 – 15:00 **Pierre Germain (Imperial College London)**

Nonlinear waves and turbulence

15:00 – 15:15 **Coffee Break**

15:15 – 15:30 **Allison Byars (U of Wisconsin)**

Global Dynamics of the small data solutions to the Derivative Nonlinear Schrödinger Equation

15:30 – 15:45 **Maximilian Ofner (U of Vienna)**

Expansion thresholds for the stability of cosmological fluids

15:45 – 16:00 **Matthias Ostermann (U of Vienna)**
Stable self-similar blowup for nonlinear wave equations beyond light cones

16:00 – 16:15 **Coffee Break**

16:15 – 16:30 **Ovidiu-Neculai Avadanei (UC, Berkeley)**
Low regularity well-posedness for the generalized surface quasi-geostrophic front equation

16:30 – 16:45 **Matthew Kowalski (UCLA)**
Dispersive decay for the energy-critical nonlinear Schrödinger equation

- **Wednesday, May 15th, 2024**

09:15 – 10:15 **Michał Kowalczyk (U de Chile, Santiago)**
Asymptotic stability of kinks in the odd energy space.

10:15 – 10:30 **Coffee Break**

10:30 – 11:30 **Kenji Nakanishi (Kyoto U)**
Initial classification of global behavior around multi-solitons for the nonlinear Klein-Gordon equation

11:30 – 11:45 **Coffee Break**

11:45 – 12:45 **Sung-Jin Oh (UC, Berkeley)**
Late time tail of waves on dynamic asymptotically flat spacetimes of odd space dimensions

12:45 – 14:15 **Lunch Break**

14:15 – 15:15 **Arthur Touati**
Initial data for stability theorems in general relativity

18:30 – 22:00 **Conference Dinner**

- **Thursday, May 16th, 2024**

10:00 – 11:00 **Sohrab Shahshahani (UMass Amherst)**
Codimension one stability of the catenoid for the hyperbolic vanishing mean curvature equation

11:00 – 11:15 **Coffee Break**

11:15 – 12:15 **Hans Lindblad (Johns Hopkins U, Baltimore)**
Scattering for wave equations with sources and slowly decaying data

12:15 – 14:00 **Lunch Break**

14:00 – 15:00 **Hans Ringström (KTH Stockholm)**
Formation of quiescent big bang singularities

15:00 – 15:15 **Coffee Break**

15:15 – 16:15 **Christoph Kehle (ETH Zurich)**
Extremal Critical Collapse

- **Friday, May 17th, 2024**

09:30 – 10:30 **Philippe G. LeFloch (Sorbonne U, Paris)**
Optimal shielding for Einstein gravity

10:30 – 10:45 **Coffee Break**

10:45 – 11:45 **Maciej Maliborski (U of Vienna)**
Periodic solutions for 1d nonlinear wave equation

All talks take place at ESI Boltzmann Lecture Hall!