

4th Conference on Mathematics of Wave Phenomena, 2027

October 4, 2027 - October 8, 2027

KIT

Scientific Program

Contributed talks

Contributed talk

Minisymposia

Minisymposium 01

[Solitons and Long-time Dynamics in Nonlinear Dispersive Equations](#)

by Jordan Berthoumieu (Karlsruhe, Germany) and Frédéric Valet (Paris-Saclay, France)

Minisymposium 02

[Spectral Theory and Waves in Complex Media](#)

by Maxence Cassier (Marseille, France), Maryna Kachanovska (Paris, France), and Konstantin Pankrashkin (Oldenburg, Germany)

Minisymposium 03

[Numerical Methods for Time-Dependent Wave Equations](#)

by Théophile Chaumont-Frelet (Lille, France) and Alexandre Ern (Paris, France)

Minisymposium 04

[High-Order Methods for Frequency-Domain Wave Problems](#)

by Théophile Chaumont-Frelet (Lille, France), Markus Melenk (Vienna, Austria), and Euan Spence (Bath, UK)

Minisymposium 05

[Dynamical, Spectral, and Unique Continuation Properties on Waveguides](#)

by Tamara Fastovska (Berlin, Germany), Illia Karabash (Bonn, Germany), Delio Mugnolo (Hagen, Germany), and Ivan Veselić (Dortmund, Germany)

Minisymposium 06

[Dynamics of Hamiltonian Systems with Spatial Confinement](#)

by Filip Ficek (Vienna, Austria) and Maciej Maliborski, (Vienna, Austria)

Minisymposium 07

[Wave Propagation in Random Multi-Scale Media and Applications](#)

by Laure Giovangigli (Palaiseau, France) and Christophe Gomez, (Marseille, France)

Minisymposium 08

[Singularity Formation in Nonlinear Waves: Existence, Stability and Asymptotics](#)

by Irfan Glogić (Bielefeld, Germany) and Nejla Nouaili, (Paris Dauphine, France)

Minisymposium 09

[Inverse Problems for Wave-Type Equations](#)

by Roland Griesmaier (Karlsruhe, Germany) and Tilo Arens (Karlsruhe, Germany)

Minisymposium 10

[Nonlinear Dispersive PDE: Low Regularity Analysis and Asymptotics](#)

by Sebastian Herr (Bielefeld, Germany) and Joachim Krieger (Lausanne, Switzerland)

Minisymposium 11

[\(In-\)Stability in Hamiltonian Fluids](#)

by Lars Eric Hientzsch (Karlsruhe, Germany) and Felice Iandoli (Cosenza, Italy)

Minisymposium 12

[Numerical Methods for Quantum and Wave Models in Electron Microscopy](#)

by Marlis Hochbruck (Karlsruhe, Germany) and Caroline Lasser (Munich, Germany)

Minisymposium 13

[Variational Methods in Non-Equilibrium Kinetic Systems](#)

by Manh Hong Duong (Birmingham, UK) and Zihui He (Bielefeld, Germany)

Minisymposium 14

[Nonlocal and Higher Order Dispersive Equations](#)

by Christian Klein (Dijon, France) and Nikola Stoilov (Dijon, France)

Minisymposium 15

[Integrable Dispersive PDEs and Related Topics](#)

by Herbert Koch (Bonn, Germany) and Xian Liao (Dalian, China)

Minisymposium 16

[Kerr Frequency Combs – from Models to Experiments and back](#)

by Christian Koos (Karlsruhe, Germany) and Wolfgang Reichel (Karlsruhe, Germany)

Minisymposium 17

[Nonlinear Partial Differential Equations on Quantum Graphs](#)

by Stefan Le Coz (Toulouse, France), Dmitry Pelinovsky (Hamilton, Canada), and Guido Schneider (Stuttgart, Germany)

Minisymposium 18

[Computing Discontinuous Solutions of Nonlinear Wave Equations](#)

by Buyang Li (Hong Kong, Hong Kong) and Jiachuan Cao (Karlsruhe, Germany)

Minisymposium 19

[Trends in Soliton Dynamics and Singularity Formation for Nonlinear Dispersive Equations](#)

by Jonas Lührmann (Cologne, Germany) and Michael McNulty (Cologne, Germany)

Minisymposium 20

[Numerical Methods for Multiscale Wave-Type Problems](#)

by Roland Maier (Karlsruhe, Germany) and Tobias Jahnke (Karlsruhe, Germany)

Minisymposium 21

[Geometric Flows and Pattern Formation with Constraints](#)

by Alexander Meiners (Oldenburg, Germany) and Hannes Uecker (Oldenburg, Germany)

Minisymposium 22

[Imaging and Quantitative Parameter Identification Methods in Complex Media](#)

by Pierre Millien (Paris, France) and Laurent Seppecher (Lyon, France)

Minisymposium 23

[Harmonic Analysis and Nonlinear Waves at low Regularity](#)

by Robert Schippa (Bonn, Germany)

Minisymposium 24

[Periodic Media and Waveguides](#)

by Ben Schweizer (Dortmund, Germany) and David Wiedemann (Dortmund, France)

Minisymposium 25

[Probabilistic Dynamics of Nonlinear Dispersive Equations](#)

by Martin Spitz (Bielefeld, Germany) and Deng Zhang (Shanghai, China)