



MAX-PLANCK-GESELLSCHAFT



# Extreme Waves

## International Workshop 24 - 28 August 2020

Oceanic rogue waves are large and unexpected surface water waves that are extremely dangerous, even to large ships such as ocean liners or submarines as well as to marine structures. They exist everywhere: on the surface of deep and shallow waters and even in the deep internal layers of the ocean. Similar waves on a much smaller scale in optical fibres are in many ways analogous to their larger counterparts of the oceanic scale. Extreme waves are presently an interdisciplinary research subject covering BEC, plasma waves and even quantum optics. Knowledge accumulated so far in this active research area may add new ideas on how extreme events of more general nature occur. The most recent findings and major concepts of extreme waves, which include rogue waves as well as exploding dissipative solitons, will be elaborated and discussed in this workshop.

### Topics

- Extreme waves in the ocean
- Optical rogue waves
- Interdisciplinary approach to extreme waves
- Mathematical description of extreme waves
- Rogue wave prediction
- Extreme waves in turbulent fields
- Extreme waves in water tanks
- Statistics of rogue waves
- Extreme waves in shallow water
- Exploding dissipative solitons



Picture by K. Hokusai (1760-1849)

### Invited speakers

Thomas Adcock (UK)  
Shalva Amiranashvili (DE)  
Uwe Bandelow (DE)  
Fabio Baronio (IT)  
Fabio Biancalana (UK)  
Elzbieta Bitner-Gregersen (NO)  
Maura Brunetti (CH)  
Svetlana Bugaichuk (UA)  
Matteo Conforti (FR)  
Claudio Conti (IT)  
Orazio Descalzi (CL)  
Margarida Facão (PT)  
Mathias Fink (FR)  
Goëry Genty (FI)  
Norbert Hoffmann (DE)  
Bahram Jalali (US)  
Bertrand Kibler (FR)  
Kenichi Maruno (JP)  
Cristina Masoller (ES)  
Arnaud Mussot (FR)  
Alan Newell (US)  
Joachim Peinke (DE)  
Michelle Sander (US)

Victor Shrira (UK)  
Alexey Slunyaev (RU)  
Pierre Suret (FR)  
Abdelmajid Taki (FR)  
Mustapha Tlidi (BE)  
Elena Tobisch (AT)  
Alessandro Toffoli (AU)  
Karsten Trulsen (NO)  
Ton van den Bremer (UK)  
Stefan Wabnitz (IT)  
Takuji Waseda (JP)

### Scientific coordinators

Nail Akhmediev  
Canberra, Australia  
  
Helmut Brand  
Bayreuth, Germany  
  
Amin Chabchoub  
Sydney, Australia

### Organisation

Claudia Domaschke  
MPIPKS Dresden

Applications received before 15th May 2020 are considered preferentially.

Applications are welcome and should be made by using the application form on the event's web page. The number of attendees is limited. The registration fee for the international workshop is 140 Euro and should be paid by all participants. Costs for accommodation and meals will be covered by the Max Planck Institute. Limited funding is available to partially cover travel expenses.

### For further information please contact:

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