

Water Waves: Mathematical Theory & Applications
Talks will take place in Babbage Building – Room 402

Wednesday, August 28th

9:00-10:00: Arrival/coffee

10:00-10:50: Karsten Trulsen - Experimental investigation of the statistics of extreme waves and wave forces on top of and behind a shoal

10:50-11:20: Svenja Ehlers - Physics-informed neural networks for phase-resolved wave data assimilation and prediction

11:20-11:50: Yang Lu - Variational numerical modelling strategies for the simulation of driven free-surface waves

11:50-12:00: One minute poster talks

12:00-13:30: Lunch

13:30-14:20: Paul Taylor - Rough seas – bound waves, power laws and the geometry of the free-surface

14:20-14:50: Coffee

14:50-15:40: Emiliano Renzi - Linear and Nonlinear Mechanisms of Wave Energy Extraction from Arrays of Wave Energy Converters

15:40-16:30: David Henry - Energy densities for nonlinear water waves

16:40-17:00: Tour of COAST Lab

Thursday, August 29th

9:00-9:50: Peter Janssen - Random phase approximation implies nearly homogeneous wave turbulence

9:50-10:20: Coffee

10:20-11:10: Alex Doak - Free-surface waves with arbitrary vorticity

11:10-12:00: Simone Michele - Heat transfer in the ocean wave-driven free-surface boundary layer

12:00-13:30: Lunch

13:30-14:20: Guillaume Ducrozet - Combined use of experimental and numerical wave tanks to investigate nonlinear wave properties

14:20-15:10: Dan Liberzon - Laboratory tool for spatio-temporal measurements of waves and slopes based on polarimetric sensing and Machine Learning

15:10-15:40: Coffee

15:40-16:30: Calin Martin - On the three-dimensional water waves equations with (constant) vorticity (*online*)

Friday, August 30th

9:00-9:50 Henrik Kalisch - Wave run-up on the West Coast of Norway

9:50-10:20: Coffee break

10:20-10:50: Conor Curtin - The Lagrangian formulation for wave motion with a shear current

10:50-11:40: Ioannis Karpadakis - The statistics of waves over planar coastal bathymetry: Experiments and numerical simulations

11:40-11:45: Closing Remarks

11:45-13:30: Lunch/departure