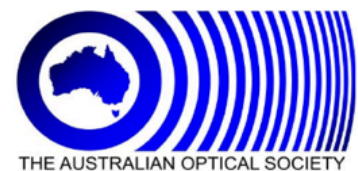


The 4th KOZWaves conference

17–19 February 2020

Singapore Theatre (B120)
Glyn Davis Building (133)
The University of Melbourne

Sponsors



Sunday 16th

Time

Registration & Icebreaker

5:00 Yasuko Hiraoka Myer Room, Sidney Myer Asia Centre
The University of Melbourne, Parkville Campus

Monday 17th

Time

8.00 **Registration**

8:30 **Welcome**

Session 1 Chair:
Andrew Melatos

8:40 Susan Scott - Gravitational waves: Detection and discoveries

9:20 Lucy McNeil - 3D studies of gravity modes and spin in neutron star progenitors

9:40 Hannah Middleton - Searching for continuous gravitational waves from low mass X-ray binaries with known rotation frequencies

10:00 Patrick Meyers – Results from the Homestake 3D seismometer array

10:20 **Coffee**

Session 2 Chair:
Halina Rubinsztein-Dunlop

10:50 Elena Vynogradova - An efficient algorithm for multiple scatterers

11:10 Michael Smith - Wiener-Hopf solutions for submerged poroelastic plates

11:30 Qiang Sun - Helmholtz equation and non-singular boundary integral method applied to multi-disciplinary wave problems

11:50 Ken Golden - Herglotz functions and homogenization for waves in random and quasiperiodic composites

12:10 Stuart Hawkins - A fast high order algorithm for multiple scattering from extremely large three dimensional configurations

12:30 **Lunch**

Session 3 Chair:
Marie Graff

1:30 John Sader - Existence of the Navier slip condition for liquid flows around nanoparticles

2:10 Martin Kocan - Convective thermals generated by a strong explosions

2:30 Ande Raghu - Numerical investigation of a three-beam array oscillating close to a rigid wall in a fluid

2:50 Donovan du Toit - Wave propagation in structures with force-moment neutralizers

3:10 Subash Chandra Martha – Diffraction of surface water waves by a pair of asymmetrical rectangular trenches

3:30 **Coffee**

Session 4 Chair:
Ross McPhedran

4:00 Halina Rubinsztein-Dunlop - Structured light in biology and quantum atom optics

4:40 Ann Roberts - Meta-optical systems for object plane Fourier filtering

5:00 Lukas Wesemann - Nanophotonics for all-optical information processing

5:20 Faris Shahidan - Plasmonic colour printing

Tuesday 18th

Time

Session 5 Chair:
Ann Roberts

8:40 David Liley – Brain waves

9:20 Brian Stout - Resonant state expansion for wave propagation response functions

9:40 Erik Garcia-Neefjes - Wave propagation in thermo-visco-elastic continua

10:00 Vladislav Sorokin – A Graded Metamaterial for Broadband Vibration Isolation

10:20 **Coffee**

Session 6 Chair:
Hugh Wolgamot

10:50 Isabela Cabral – Changes in extreme waves in the Arctic Ocean

11:10 Roger Hosking – Long ocean wave: Ice shelf interaction

11:30 Fabien Montiel – Ocean wave attenuation in the Ross Sea marginal ice zone

11:50 Alberto Alberello – Stereo camera measurements of extreme waves in the Antarctic marginal ice zone

12:10 Azam Dolatshah – Wave-induced sea ice drift: An experimental perspective

12:30 **Lunch**

Session 7 Chair:
Alberto Alberello

1:30 Miguel Onorato – Enrico Fermi and the birth of modern nonlinear wave physics – Public lecture

2:20 Alberto Meucci - Projected 21st Century changes in extreme wind-wave events

2:40 Colin Whittaker – Experimental investigation of particle transport by wave groups

3:00 Amandeep Kaur – Diffraction of water waves by finite floating structure over a parabolic bottom in the presence of seawall

3:20 **Coffee**

Session 8 Chair:
Luke Bennetts

3:50 Ross McPhedran – Resonant states for scattering problems: killing mie softly

4:10 Gregory Chaplain – Reversed Conversion: Umklapp Scattering and Flat Lensing

4:30 Mike Meylan - Lax-Phillips Scattering Theory for Simple Wave Scattering

4:50 Marie Graff – How to solve inverse scattering problems without knowing the source term

5:10 Lavesh Rughunanan – Locking and veering in periodically coupled one dimensional waveguides

5:30 Yoko Furokawa – U.S. Office of Naval Research Global: Activities and funding opportunities

Conference Dinner

7:00 Project Forty Nine, 107 Cambridge St, Collingwood VIC 3066
(venue booked for 3hour event)

Wednesday 19th

Time

Session 9 Chair:
Malte Peter

8:40 Kasper van Wijk – Applications of imaging and monitoring using laser ultrasonics

9:20 Elena Vynogradova - Spectral Characterization of a Finite Parallel-Plate Waveguide

Session 10 Chair:
Azam Dolatshah

9:40 Malte Peter - Graded arrays for spatial frequency separation and amplification of water waves

10:00 Wenhua Zhao – Large run-up due to tertiary wave-structure interactions in random seas

10:20 **Coffee**

Session 11 Chair:
Colin Whittaker

10:50 Nail Akhmediev - Rogue waves in various systems

11:40 Elmira Fadaeiazar - Wave turbulence and intermittency in ocean waves

12:00 Hugh Wolgamot – Experimental observation of rainbow trapping in water waves

12:20 Marzieh Derkani – Metocean conditions during the Antarctic Circumnavigation Expedition: A comparison with model predictions

12:40 **Lunch**

Session 12 Chair:
Elena Vynogradova

1:40 Richard Manasseh - Towards prediction of bubble populations using passive acoustics

2:00 Martin Sagradian - Acoustic Axisymmetric Oscillations in Finite Multi-Sectioned Cylindrical Pipes with Sound-Soft Walls

2:20 Turker Topal - Slotted Infinitely Long Metallic Cylinders of Arbitrary Cross Section and the Helmholtz Mode of Acoustic Resonators

2:40 Hyuck Chung - Acoustic behaviour of multi layered split-ring resonators

3:00 Alex Skvortsov - Vibroelastic Models of Flow Noise

3:20 **Coffee**

Session 13 Chair:
Elmira Fadaeiazar

3:50 David Skene – On the causality and predictability of surface gravity waves with applications for offshore structures

4:10 Ngan Tran – A study of the nonlinear hydrodynamic forces acting on a submerged disk-like WEC undergoing combined motions

4:30 Marine Le Gal – Numerical models of the 1771 Meiwa tsunami to better understand tsunami-reef interactions

4:50 Filippo Nelli – Sea-states reconstruction using ship motion data

5:10 **Close**