

2019 WISE meeting

12-16 May 2019
Jozankei View Hotel, Sapporo, Japan

Agenda

Sunday, 12 May 2019

18:00 – 21.00 *Ice Breaker Reception at the Jozankei View Hotel (room TBD)*

Monday, 13 May 2019

08.45 – 09.00 **Takuji Waseda**
Welcome - logistical information

Measurements – Chair: **P.Smit**

09.00 – 09.30 **D.Hauser**, L.Aouf, B.Cha pron, F.Collard, A.Dalphinnet, L.Delays, C.Dufout, F.Gouillon, A.Grouazel, L.Hermozo, J.-M-Lachiver, A.Mironov, A.Mouche, F.Nougouier, A.Ollivier, R.Rodriguez, F.Schippers, C.Tison, and C.Tourin

First results on wave spectra parameters from the CFOSAT satellite

09.30 – 10.00 **O.Breivik**, K.O.Strand, G.Pedersen, F.B.Vikebo, S.Sundby, and K.H.Christensen

Long-term statistics of bubble depth and the energy flux from breaking waves

10.00 – 10.30 **P.V.Guimaraes**, **F.Leckler**, J.-F-Filipot, R.Duarte, and **A.Benetazzo**

Wave breaking observation during storm events

10.30– 11.00 *Coffee Break*

Physics – Chair: **S.Y.Annenkov**

11.00 – 11.30 S.Watanabe, **W.Fujimoto**, **T.Nose**, **T.Kodaira**, G.Davies, D.Lechner, and **T.Waseda**

Reconstruction of a dynamically consistent nonlinear 3D wave field with stereo imaging and data assimilation

11.30 – 12.00 **S.I.Badulin, and V.E.Zakharov**
The generalized Phillips spectrum and dissipation of wind-driven waves

12.00 – 12.30 **L.Shemer**
The role of nonlinear effects in spatial evolution of young wind-waves

12.30 – 14.00 *Lunch Break*

Experiments – Chair: **A.Toffoli**

14.00 – 14.30 **A.Benetazzo, L.Cavaleri, H.Ma, S.Jiang, F.Bergamasco, F.Barbariol, W.Jiang, S.Chen, and F.Qiao**
Analysis of the effects of fish oil on wind waves and consequences for air-sea interaction studies

14.30 – 15.00 **Y.Troitskaya, A.Kandaurov, M.Vdovin, D.Sergeev, D.Kozlov, O.Ermakowa, A.Zotova, and A.Kuznetsova**
Sea spray production and spray-mediated ocean-atmosphere fluxes at high winds

15.00 – 15.30 **G.Caulliez, and R.Chemin**
Observations of micro-scale capillary waves on short wind-wave surface

15.30 – 16.30 *Coffee Break and Poster Session*

Measurements – Chair: **Y.Troitskaya**

16.30 – 17.00 **P.Smit, and T.Janssen**
Swell scintillation by submesoscale currents

17.00 – 17.30 **J.Thomson, M.Derakhti, and J.T.Kirby**
Intermittent wave breaking and turbulence

Tuesday, 14 May 2019

Coupling– Chair: **A.Babanin**

08.30 – 09.00 **J.Du, X.G.Larsen, R.Bolanos, M.Badger, and F.Hua**

The impact of wind wave coupling on the coastal wind and wave simulations during storms

09.00 – 09.30

Y.Kita, and T.Waseda

Atmospheric turbulence structures shifted by wave directional diversity

09.30 – 10.00

A.V.Soloviev, C.W.Dean, B.Vanderplow, B.K.Haus, and R.Lukas

The air-sea interface under tropical cyclone conditions during rapid intensification: numerical simulation and extension of laboratory results to open ocean conditions

10.00 – 10.30

Coffee Break

Measurements – Chair: A.Benetazzo

10.30 – 11.00

R.E.Jensen, C.Hall, S.C.Dillon, R.H.Bouchard, and V.Swail

Evaluation of the new NOAA National Data Buoy Center (NDBC) SCOOP 2.1D-foam buoy system

11.00 – 11.30

C.Raoult, F.Leckler, J.-F.Filipot, P.Guimaraes, and H.Michaud

Stochastic wave models and extreme events

11.30 – 12.00

L.Lenain, and W.K.Melville

Properties of wind-generated surface waves across the equilibrium-saturation range

12.00 – 12.30

R.Soffer, T.Vrecica, E.Kit, and Y.Toledo

Observations, modelling, and inter-comparison of waves from deep to intermediate waters in the East Mediterranean basin

12.45 – (18.30)-20:00

Lunch and Field Trip (schedule subject to change)

Wednesday, 15 May 2019

Physics - Chair: Chair: Y.Toledo

08.30 – 09.00

S.Y.Annenkov, and V.I.Shrira

When is the dynamic non-gaussianity essential for water wave fields?

09.00 – 09.30

A.Pushkarev, and V.Zakharov

Nonlinear ocean waves amplification (NOWA) in straits: surface wind waves energy pipelines in Fourier-read space

09.30 – 10.00

H.Houtani, T.Waseda, and K.Tanizawa

Coincidence of the wave profiles between spatially periodic and temporally periodic modulated wave trains

10.00 – 11.00

Coffee Break and Poster Session

Modelling - Chair: A.Pomaro

- 11.00 – 11.30 **J.-G.Li, and A.Saulter**
WAVEWATCH III SMC grid update for multi-resolution winds and hybrid parallelization
- 11.30 – 12.00 **L.Cavaleri, M.Bajo, F.Barbariol, M.Bastianini, A.Benetazzo, L.Bertotti, J.Chiggiato, S.Davolio, C.Ferrarin, L.Magnusson, A.Papa, P.Pezzutto, A.Pomaro, and G.Umgiesser**
The October 29, 2018 storm in Northern Italy – an exceptional event and its modeling
- 12.00 – 12.30 **F.Barbariol, J.H.Alves, A.Behrens, A.Benetazzo, L.Bertotti, J.Bidlot, L.Cavaleri, P.pezzutto, M.Sclavo, J.Staneva, and J.Thomson**
Maximum wave heights from numerical wave models
- 12.30 – 14.00 *Lunch Break*

Coupling – Chair: L.Cavaleri

- 14.00 – 14.30 **A.Babanin,**
Air-sea interaction
- 14.30 – 15.00 **J.Bidlot**
The ECMWF fully coupled system
- 15.00 – 16.00 **open discussion on air-sea interactions**
- 16.00 – 17.30 *Coffee Break and Poster Session*
- 19.00 - 23.00 *Dinner at Jozankei View Hotel Banquet Room*

Thursday, 16 May 2019

Modelling – Chair: F.Barbariol

- 08.30 – 09.00 **M.Derakhti, J.T.Kirby, J.Thomson, M.L.Banner, and S.Grilli**
Predicting the breaking onset and strength of gravity water waves from deep to shallow water
- 09.00 – 09.30 **S.Gremes-Cordero, E.Rogers, Y.Fan, and G.Jacobs**

Reduction of significant wave height errors from WAVEWATCH III output through an empirical approach based on thermal stability

09.30 – 10.00 **A.Pomaro, J.-R.Bidlot, A.Sanchez-Arcilla, and L.Cavaleri**
ERA5 capability to reproduce the physical processes in a climate change perspective

10.00 – 11.00 *Coffee Break and Poster Session*

Measurements – Chair: L.Lenain

11.00 – 11.30 **N.Pizzo, L.Deike, L.Lenain, and W.K.Melville**
Lagrangian transport by breaking deep-water surface waves

11.30 – 12.00 **A.Toffoli, A. Alberello, A.Dolatshsh, L.G.Bennetts, and M.Onorato**
An experimental model of wave attenuation in pancake ice

12.00 – 12.30 **A.Alberello, L.Bennetts, A.Benetazzo, F.Bergamasco, M.Onorato, M.Vichi, K.MacHutchan, B.Ntamba Ntamba, F.Nelli, and A.Toffoli**
Measuring waves in the marginal ice zone with stereo-camera imaging on board the S:A. Agulhas II icebreaker

12.30 – 14.00 *Lunch Break*

Modelling - Chair: S.Gremes-Cordero

14.00 – 14.30 **J.McKee Smith, T.Hesser, and M.Bryant**
Unstructured WAVEWATCH III applied for nearshore waves

14.30 – 15.00 **M.Yu.Markina, J.H.P.Studholme, and S.K.Gulev**
Wave-induced response of the Southern Ocean mixed layer to changes in large-scale atmospheric circulation

15.00 – 15.30 **I.S.Cabral, I.R.Young, and A.Toffoli**
A non-stationary extreme value analysis applied to the Arctic Ocean

15.30 – 16.00 *Coffee Break*

16.00 *Meeting Closed*

Posters

- P-01 **A.Abdolali**, A.Roland, A.Ven Der Westhuysen, **J.Meixner**, A.Chawla, T.Hesser, and **J.Smith**
Towards alignment of computational efficiency and accuracy of WAVEWATCH III
- P-02 **L.Cavaleri**, **A.Benetazzo**, F.Bergamasco, J.Yoo, S.-S.Kim, **L.Bertotti**, **F.Barbariol**, and J.-S.Shim
Analysis of the directional wind wave field including extremes during storm and typhoon conditions
- P-03 **M.H.Derkani**, **S.Zieger**, F.Nelli, L.Aouf, and **A.Toffoli**
Metocean observations in the Southern Ocean: a comparison with global wave predictions and satellite data
- P-04 **A.Dolatshah**, F.Nelli, L.G.Bennets, **A.Alberello**, M.H.Meylan, J.P.Monty, and **A.Toffoli**
Hydroelastic interactions between water waves and floating freshwater ice
- P-05 **W.Fujimoto**, and **T.Waseda**
Ensemble-based data assimilation for nonlinear reconstruction of surface waves
- P-06 **Y.Fujiwara**, Y.Yoshikawa, and Y.Matsumura
Wave-resolving simulation as a tool for wave-induced mixing studies
- P-07 **H.Garcia-Nava**, **F.J.Ocampo-Torres**, D.S.Pelaez-Zapata, and P.Osuna
Air-sea interaction experiments in the CEMIE-Oceano Natural Laboratory
- P-08 **V.V.Geogjaev**, **S.I.Badulin**, and V.E.Zakharov
Numerical modeling of isotropic and anisotropic swell
- P-09 **N.Hashimoto**
Studies toward the development of accurate directional spectrum estimation method using field observation data
- P-10 **H.Jiang**
Spatially tracking wave events in partitioned numerical wave model outputs
- P-11 **J.Li**, **C.Guan**, Q.Liu, and W.Zhang
Growth of wave height with retreating ice cover in the Arctic
- P-12 **T.Kim**, and J.Lee
Analysis of extreme waves generated by the typhoon in the East China Sea
- P-13 **T.Kodaira**, and **T.Waseda**

Internal solitary waves in a two-fluid system with a free surface

- P-14 **T. Nose, T. Waseda, T. Kodaira,** J. Inoue
Waves in ice-covered water under strengthening on-ice winds
- P-15 **S.Kutnetsov,** and **Y.Saprikina**
Discrete frequency downshifting of wave spectra due to increasing wave steepness: field and laboratory experiments
- P-16 **S.Li**
On the wave dependence of sea surface roughness in mixed seas and moderate wind conditions
- P-17 **D.Li,** J.Staneva, S.Grayek, A.Behrens, and B.Yin
An atmosphere-wave regional coupled model over the East China Sea
- P-18 **Q.Liu,** O.Gramstad, and **A.V.Babanin**
Simulating the response of ocean waves to turning winds with the generalized kinetic equation.
- P-19 **K.Matsuura,** K.Kuroki, Y.Sato, and M.Maeda
Introduction to POLARIS: Precise-Ocean data LibrARy and Intelligent Service
- P-20 **J. Meixner,** B.Reichl, and J.Wang
Impacts of wind driven ocean mixing in a coupled atmosphere-ocean-ice-wave model
- P-21 **F.J.Ocampo-Torres,** L.Robles-Diaz, D.Pelaez-Zapata, C.F.Herrera-Vasquez, N.Rasele, P.Osuna, and **H.Garcia-Nava**
Analysis of wind and wave development and the effect of atmospheric fronts
- P-22 **H. Okachi,** and T.J.Yamada
Effects of windy and rainy conditions on the momentum and heat exchange at the lower boundary layer
- P-23 **V.Polnikov**
A model for wind-drift current
- P-24 **W.E.Rogers,** N.Kumar, and **J.Thomson**
Implementation of sea ice in the wave model SWAN
- P-25 **Y.Saprykina,** and **S.Kutnetsov**
Influence of scenario of non-linear wave transformation on cross-shore sediment transport in coastal zone
- P-26 **Y.F.Shi**
Analysis of the formation of sea ice based on comprehensive observation data

- P-27 **I.Shugan**, and Y.-Y.Chen
Runup of solitary waves on the inclined beach
- P-28 **M.Sun**
Data assimilation in MASNUM-WAM surface wave model
- P-29 **J.Suzuki**
Prediction accuracy of waves forecasted by COMEINS using WAVEWATCH III
- P-30 **Y.Troitskaya**, A.Kandaurov, M.Vdovin, D.Sergeev, D.Kozlov, O.Ermakowa, A.Zotova, and A.Kuznetsova
Sea spray production and spray-mediated ocean-atmosphere fluxes at high winds
- P-31 **G. van Vledder**
A scalable method of quadruplet interactions to quantify its role on wave model performance
- P-32 **M.Gerardo**, V.Zapata, I.Ramirez/Serrano, **H.Garcia-Nava**, **F.J.Ocampo-Torres**, E.Mendoza-Baldwin, and E.Torres-Orozco
Subsurface fixed horizontal plate crowned with artificial vegetation for wave energy dissipation
- P-33 T.Vrecica, **Y.Toledo**, and V.Shrira
Generation of infragravity waves by wind gusts and other other spatio-temporal inhomogenities of the wave field
- P-34 **A.Webb**, T.Shimura, and N.Mori
Wave climate projection for the Northwestern Atlantic
- P-35 **A.Wiese**, E.Stanev, W.Koch, A.Berhens, B.geyer, and J.Staneva
Wave/atmospheric modeling, satellite and in situ observations in the Southern North Sea> the impact of two-way coupling on the wave and the lower atmosphere
- P-36 **S.Zieger**, S.Aijaz, D.Greenslade, and J.Keper
Hindcasting of tropical cyclone winds and waves for the north-west shelf of Australia with application to extreme evalue analysis
- P-37 M.Zijlema, and **G. Van Vledder**
Recent developments in the SWAN wave model
- P-38 C.Yue, **J.Li**, **C.Guan**, X.Lian, and K.Wu
Surface wave simulation during winter with sea ice in the Bobai Sea