

Thursday, June 03

14:05 - 14:55

G11 - IS07 - Machine Learning and Artificial Intelligence in Marine Engineering I

Invited Session organized by Amedeo Cesta, Matteo Diez, Thomas C. Fu, Laura Mainini and Jeroen Wackers

Th21

Room: Room Glasgow

Compiler-Assisted Identification of Speed-ups by Quantum Techniques in Numerical Methods used in Marine Engineering

JOSEPH Fitzsimons AMMAR Husain SI-HUI Tan JAYNE Thompson

[Abstract](#)

Data-Driven Identification of Critical Wave Groups

KEVIN Maki KEVIN Silva

[Abstract](#)

RECURRENT-TYPE NEURAL NETWORKS FOR REAL-TIME SHORT-TERM PREDICTION OF SHIP MOTIONS IN HIGH SEA STATE

D D'Agostino M Diez A Serani F Stern

[Abstract](#)

Seakeeping analysis of monohull ships at preliminary design using artificial neural networks.

JOSÉ ENRIQ Gutiérrez-Romero PABLO Romero-Tello BORJA Serván-Camas

[Abstract](#)

Wave calibration in numerical wave tanks using AI methods

CIARAN Finnegan CHARLES Gillan PAL Schmitt

[Abstract](#)

15:20 - 16:00

G12 - IS07 - Machine Learning and Artificial Intelligence in Marine Engineering II

Invited Session organized by Amedeo Cesta, Matteo Diez, Thomas C. Fu, Laura Mainini and Jeroen Wackers

Th25

Room: Room Glasgow

Geometric Convolutional Neural Networks – A Journey to Surrogate Modelling of Maritime CFD

ASAD Abbas MAX Haase ANDREW Malcolm ASHKAN Rafiee

[Abstract](#)

Artificial Intelligence to enhance productivity in marine design applied to a marine propeller

D Amadori P Baqué C Hirsch B Mallol M van den Boogaard D Wunsch L Zampieri

[Abstract](#)

Non-intrusive data-driven model order reduction techniques coupled with parameter space dimensionality reduction and automatic learning for modern naval digital twins

N Demo A Mola G Rozza M Tezzele

[Abstract](#)

Geometry-Driven Parametric Sensitivity Analysis of Free-Form Marine Shapes

MATTEO Diez PANAGIOTIS Kaklis SHAHROZ Khan ANDREA Serani

[Abstract](#)

Friday, June 04

09:00 - 10:00

G13 - IS07 - Machine Learning and Artificial Intelligence in Marine Engineering III

Fr04

Room: Room Glasgow

Invited Session organized by Amedeo Cesta, Matteo Diez, Thomas C. Fu, Laura Mainini and Jeroen Wackers

Accessibility for maintenance in engine room: a prediction tool for operational costs estimation during the design process

PAOLA Gualeni TOMASO Vairo

[Abstract](#)

Towards Automatic Parameter Selection for Multifidelity Surrogate-Based Optimization

MATTEO Diez RICCARDO Pellegrini ANDREA Serani MICHEL Visonneau JEROEN Wackers

[Abstract](#)

A comparison of Multi-Index Stochastic Collocation and Stochastic Radial Basis Function Surrogates for Ship Performance Assessment

RICCARDO Brogna MATTEO Diez RICCARDO Pellegrini CHIARA Piazzola ANDREA Serani LORENZO Tamellini

[Abstract](#)

Hierarchical Multifidelity Models with Calibration for Turbulent Flows

TIMOFEY Mukha SALEH Rezaeiravesh PHILIPP Schlatter RICARDO Vinuesa

[Abstract](#)

Physics-based and Machine learning predictions of maneuvering forces in unsteady inflow conditions

BHARATHRAM Ganapathisubramani RODRIGO Vilumbrales Garcia GABRIEL D. Weymouth

[Abstract](#)

Numerical prediction of propeller induced hull pressure pulses using RANS and IDDES

R.E. Bensow M. Ge U. Svernnberg

[Abstract](#)

10:30 - 11:10

G14 - IS07 - Machine Learning and Artificial Intelligence in Marine Engineering IV

Fr08

Room: Room Glasgow

Invited Session organized by Amedeo Cesta, Matteo Diez, Thomas C. Fu, Laura Mainini and Jeroen Wackers

Measuring the efficiency of rough, moving boundaries

BHARATHRAM Ganapathisubramani JONATHAN Massey GABRIEL Weymouth

[Abstract](#)

Smart and efficient marine water monitoring

CABIDDU Daniela MICHELA Mortara BERRETTA Serena PITTALUGA Simone

[Abstract](#)

Data Fusion of SAR Imagery for Enhanced Ship Wake Detection

LAURA Freeman ERIK Higgins JONATHAN Pitt DANIEL Sobien

[Abstract](#)

Objective design assessment of harbours and associated fairways

BUGGE Jensen OLE Vilmann

[Abstract](#)