

smp'17 Conference program

Monday 12th June

8.00	13.00	Registration		
9.00	9.30	Welcome/Edison 1 & 2		
9.30	11.00	Mon1A Session 1A Cavitation Erosion/Plenary room Edison 1 Session Chair: Ki-Han Kim	Mon1B Session 1B Water jets/Room Edison 1 Session Chair: Tom J.C. Van Terwisga	
9.30	10.00	1205 A Qualitative Study on the Relationship Between Cavitation Structure and Erosion Region around a 3D Twisted Hydrofoil by Painting Method Y.T. Cao, X.X. Peng, K. Yan, L.H. Xu, L.W. Shu	1157 Design and Verification of a Noise Test Device for Water-jet Propulsion Pumps Z. Wang, Y. Cai, C.-J. Yang	
10.00	10.30	1212 Experimental and Numerical Study of Polyurea Failure under Cavitation J.-K. Choi, G.L. Chahine	1165 A Head Correction Method In Model Experiment of Water-jet Propulsion Axial-flow Pump With Front Guide Vane G. Ji, Z. Wang, Y. Cai, N. Li	
10.30	11.00	1241 Cavitation erosion fracture mechanisms and their detection in ship operation I. Armakolas, J. Carlton, M. Vidakovic, T. Sun, K.T.V. Grattan	1198 Comparison of Different Methods for Estimating Energetics Related to Efficiency on a UUV with Cephalopod Inspired Propulsion M. Krieg, K. Mohseni	
11.00	11.15	Coffee break		
11.15	13.15	Mon2A Session 2A Cavitation Modeling/Plenary room Edison 1 Session Chair: Rickard E Bensow	Mon2B Session 2B Viscous Flow/Room Edison 2 Session Chair: Timo Siikonen	Mon2C Session 2C Unconventional/Room Ollila Session Chair: Luca Savio
11.15	11.45	1210 Numerical Study of the Effects of Gas Diffusion on Bubble Distribution about a Lifting Surface C.-T. Hsiao, J. Ma, G.L. Chahine	1179 On the Use of the γ -Re ₀ Transition Model for the Prediction of the Propeller Performance at Model-Scale J.M. Baltazar, D. Rijpkema, J. Falcão de Campos	1135 Simulation-driven Design of a Rim Drive for an Autonomous Vehicle H. Grümmer, S. Harries, A.C. Hochbaum
11.45	12.15	1213 VOF Simulations of Hydrodynamic Cavitation Using the Asymptotic and Classical Rayleigh-Plesset Models S. Muzaferija, D. Papoulias, M. Peric	1194 Influence of Propulsion Type on the Near-Wake Evolution of Kinetic and Potential Energy M.C. Jones, E.G. Paterson	1156 Open Water Tests of Unconventional Ducted Propulsor without Rotating Blades in Circulating Water Channel K. Suzuki, M. Kasahara, S. Ohji
12.15	12.45	1186 Computational fluid dynamics prediction of marine propeller cavitation including solution verification T. Lloyd, G. Vaz, D. Rijpkema, A. Reverberi	1137 Direct Numerical Simulation of Transitional Flow over a NACA66 Propeller Section A. Ducoin, J.A. Astolfi, S. Sharma	1199 Development of New Type Low Drag Rudders in Propeller Slipstream T. Kanemaru, A. Yoshitake, J. Ando
12.45	13.15	1184 Simulating Compressibility in Cavitating Flows with an Incompressible Mass Transfer Flow Solver S. Schenke, T.J.C. van Terwisga	1218 Modification of Eddy-Viscosity Turbulence Model considering Boundary Layer Transition for predicting Ship Hull Wake Flow K. Fujiyama, T. Waku, T. Irie, N. Hasuike	1127 Case Study on CFD Simulation and Experiment of New Developed Propeller for Trailing Thai Boat J. Noosomton, W. Gunnuang
13.15	14.15	Lunch		
14.15	15.45	Mon3A Session 3A Acoustics/Vibration/Plenary room Edison 1 Session Chair: Moustafa Abdel-Maksoud	Mon3B Session 3B Unconventional/Room Edison 2 Session Chair: Antonio Sanchez-Caja	
14.15	14.45	1182 A Semi-Empirical Method to Predict Broadband Hull Pressure Fluctuations and Underwater Radiated Noise by Cavitating Tip Vortices J. Bosschers	1232 On the significance of the pitching axis location for Flapping Wing Systems of swept outlines under Spring Loaded or Active Control of the pitching motion V. Tsarsitalidis, P. Gerasimos	
14.45	15.15	1220 CFD and CHA simulation of the underwater noise induced by a marine propeller in two-phase flows V.M. Viitanen, A. Hynninen, L. Lübke, R. Klose, J. Tanttari, T. Sipilä, T. Siikonen	1155 Unsteady Hydrodynamic Modeling of a Cycloidal Propeller A. Halder, C. Walther, M. Benedict	
15.15	15.45	1154 Effect of Propeller Eccentric Forces on the Bearing Loads of the Complicated Shafting System for Large Container Ships T. Lee, G. Song, J. Kim, J. Lee, H. Park	1130 Development of a Numerical Model for the Hydrodynamic Performance Analysis of a Collective and Cyclic Pitch Propeller A. Dubois, Z.Q. Leong, H.D. Nguyen, J.R. Binns	
15.45	16.00	Coffee break		
16.00	17.30	Mon4A Session 4A Energy Saving Devices/Plenary room Edison 1 Session Chair: Chen-Jun Yang	Mon4B Session 4B Propulsor Dynamics/Room Edison 2 Session Chair: Stefano Brizzolara	
16.00	16.30	1107 Study on Extrapolation Method for Self-Propulsion Test with Pre-Swirl Device M.C. Kim, Y.J. Shin, W.J. Lee, J.H. Lee	1167 Analysis of Dynamic Loads on Azimuthing Ducted Propulsor under Off-Design Operation Conditions N. Berchiche, V. Krasilnikov, K. Koushan	
16.30	17.00	1129 Study on Performance of Combined Energy Saving Devices for Container Ship by Experiments J.H. Lee, M.C. Kim, Y.J. Shin, J.G. Kang	1183 Dynamic Instabilities in Propeller Crashback M. Pontarelli, J.E. Martin, P.M. Carrica	
17.00	17.30	1164 The Battle Royal of Energy Saving Devices for a Ship Y. Okada, K. Katayama, A. Okazaki, M. Okazaki, K. Fukuda, Y. Kobayashi, T. Kajino	1222 Efficient Prediction of Crashback Performance of Controllable Pitch Propellers M. Pergande, K. Wang, J.C. Neitzel-Petersen, M. Abdel-Maksoud	
19.00	20.30	Welcome Reception hosted by City of Espoo		

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Tuesday 13th June

9.00	10.30	Tue1A Session 5A Design/Optimization/Plenary room Edison 1 Session Chair: Vasileios Tsarsitalidis	Tue1B Session 5B Ocean Turbines/Room Edison 2 Session Chair: Francesco Salvatore	
9.00	9.30	1141 Propeller geometry optimisation for pressure pulses reduction: an analysis of the influence of the rake distribution S. Gaggero, G. Tani, D. Villa, M. Viviani, F. Miglianti, P. Ausonio, P. Travi, G. Bizzarri, F. Serra	1109 Modified BEM Methods for the Marine Current Turbine Performance Analysis under Non-uniform Inflow Condition H. Li, L. Yu, Y. He	
9.30	10.00	1180 Automated multi-objective optimization of ship propellers T.J. Huisman, E.-J. Foeth	1111 Humpback whale inspired design for tidal turbine blades W. Shi, M. Atlar, R. Norman	
10.00	10.30	1134 Application of multi-objective optimization based design to high speed craft propellers S. Gaggero, G. Tani, D. Villa, M. Viviani, P. Ausonio, P. Travi, G. Bizzarri, F. Serra	1117 Design Optimization of a Horizontal Axis Tidal Stream Turbine Blade using CFD M. Kumar, G.W. Nam, S.J. Oh, J. Seo, A. Samad, S.H. Rhee	
10.30	11.00	<i>Coffee break</i>		
11.00	13.00	Tue2A Session 6A Propeller/Rudder/Hull Interaction/Plenary room Edison 1 Session Chair: Shin Hyung Rhee	Tue2B Session 6B Scale Effects/Room Edison 2 Session Chair: Ramon Quereda	Tue2C Session 6C Arctic/Room Ollila Session Chair: John S Carlton
11.00	11.30	1221 Analysis of Propeller-Hull Interaction Phenomena on a Self-Propelled Axisymmetric Body A. Eslamdoost, J. Andersson, R. Bensow, R. Gustafsson, M. Hyensjö	1236 The effect of propeller scaling methodology on the performance prediction S. Helma, H. Streckwall, J. Richter	1142 Application of Polar Class Rules for Fatigue to an Existing Arctic Class Icebreaker Propeller M.A. Amin, B. Veitch
11.30	12.00	1185 A RANS-BEM coupling procedure for calculating the effective wakes of ships and submarines D. Hally	1172 Scale effects of marine propellers in POT and self propulsion test conditions N. Hasuike, M. Okazaki, A. Okazaki, K. Fujiyama	1240 The problem of propeller design for high ice class transportation ships A.V. Pustoshny, G.K. Darchiev, I.G. Frolova
12.00	12.30	1132 Nominal vs. Effective Wake Fields and their Influence on Propeller Cavitation Performance P.B. Regener, Y. Mirsadraee, P. Andersen	1146 RANSE-based Simulation and Analysis of Scale Effect on Open-Water Performance of the PPTC-II Benchmark Propeller X.-Q. Dong, W. Li, C.-J. Yang, F. Noblesse	1176 CFD application for an icebreaker propeller design M.P. Lobachev, T.I. Saifullin, A.E. Taranov, I.G. Frolova
12.30	13.00	1115 Numerical Investigation of Submarine Tail Form on the Hull Efficiency Y. Arikon Özden, M.C. Özden, F. Çelik	1143 Full scale CFD: the end of the Froude-Reynolds battle N. Bulten, P. Stoltenkamp	1163 Multiple propulsion unit icebreakers; the effect of fore propulsion units on icebreaker performance in open water and ice condition L. Shchemelinin, A. Malikov, I. Saisto, A. Nerman
13.00	14.00	<i>Lunch</i>		
14.00	15.30	Tue3A Session 7A Podded Propulsors. Extrapolation/Plenary room Edison 1 Session Chair: Mehmet Atlar	Tue3B Session 7B Acoustics/Vibration/Room Edison 2 Session Chair: Johan Bosschers	
14.00	14.30	1131 On the advanced extrapolation method for a new type of podded propulsor via CFD simulations and model measurements T. Veikonheimo, P. Miettinen, J. Huisman	1147 On predicting the sound from a cavitating marine propeller in a tunnel A. Hynninen, J. Tanttari, V. Viitanen, T. Sipilä	
14.30	15.00	1166 Numerical investigation into scale effect on the performance characteristics of twin-screw offshore vessels V. Krasilnikov, L. Sileo, K. Steinsvik	1168 Effect of Propeller Tip Clearance on Hull Pressure Pulses R.E. Bensow, R. Gustafsson	
15.00	15.30	1120 Conventional propellers in CRP-POD configuration. Tests and extrapolation R. Quereda, M. Perez Sobrino, J. Gonzalez-Adalid, C. Soriano	1110 Large Eddy Simulation of Propeller in forward mode of operation J. Keller, P. Kumar, K. Mahesh	
15.30	15.50	<i>Coffee break</i>		
15.50	16.50	Tue 4A Session 8A Cavitation Erosion/Plenary room Edison 1 Session Chair: Georges L. Chahine	Tue 4B Session 8B Experimental Techniques/Room Edison 2 Session Chair: Mario Felli	
15.50	16.20	1193 A study on the numerical prediction of cavitation erosion for propellers O. Usta, B. Aktaş, M. Maasch, O. Turan, M. Atlar, E. Korkut	1118 The Upgrade of the Large Cavitation Tunnel of the Marine Technology Centre in Trondheim L. Savio, L. Sileo, C. Muthanna, S. Steen, S. Spence, K. Berget	
16.20	16.50	1126 Time accurate numerical cavitation erosion prediction of multiphase flow through a venturi B. Aktaş, D. Ponkratov	1214 Cavity Shape Measurement Using Combination Line CCD Camera Measurement Method K. Shiraishi, Y. Sawada, K. Hoshino	
17.00	18.00	Visiting VTT and Aalto facilities		

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Wednesday 14th June

9.00	10.30	Wed1A Session 9A Acoustics/Vibration/Plenary room Edison 1 Session Chair: Sverre Steen	Wed1B Session 9B Propeller/Rudder/Hull Interaction/Room Edison 2 Session Chair: José Falcão de Campos	
9.00	9.30	1226 Full-Scale Measurements of Underwater Radiated Noise of a Catamaran Research Vessel S. Turkmen, M. Atlar, N. Sasaki	1234 Calculation of Penetrated Wake Alignments in a Three Dimensional Panel Method for the Rudder Design Process A. Falkenhorst, C.M. Steinbach	
9.30	10.00	1106 A detail computational hydro – acoustics analysis for hydrofoils with straight and wavy leading edges N. Charalambous, I. Eames	1124 Propeller-hull interaction coefficients: classic vs alternative system G.I. Kanevsky, A.M. Klubnichkin	
10.00	10.30	1116 A Hybrid Numerical Method for Investigating Underwater Sound Propagation of Cavitating Propellers U. Goettsche, M. Scharf, S. Berger, M. Abdel-Maksoud	1233 Prediction of the Propeller-induced Hull Pressure Fluctuation via a Potential-based Method: Study of the Rudder Effect and the Effect from Different Wake Alignment Methods Y. Su, S. Kim, W. Du, S.A. Kinnas, M. Grekula, J. Hallander, D.-Q. Li	
10.30	11.00	<i>Coffee break</i>		
11.00	13.00	Wed2A Session 10A Hydroelasticity/Composite Propellers/Plenary room Edison 1 Session Chair: Yin Lu (Julie) Young	Wed2B Session 10B Tip Vortex Flow/Cavitation/Room Edison 2 Session Chair: Poul Andersen	Wed2C Session 10C Design. Numerical Methods/Room Ollila Session Chair: Stefano Gaggero
11.00	11.30	1113 A Design Concept of Composite Marine Propeller for Long Stroke Slow Speed Main Engine H. Lee, J. Hur, J.H. Park, Z.H. Hah, M.-C. Song, B.-J. Chang	1148 Implicit Large Eddy Simulation of Tip Vortex on an Elliptical Foil A. Asnaghi, R. Bensow, U. Svennberg	1242 A generalized description of hydrodynamic parts based on aerodynamic profile sections E. Praefke, T. Stoye, C. Abt
11.30	12.00	1201 Coupled Numerical Simulation of an Aluminum and a Composite Hydrofoil in Steady Flows L. Pernod, A. Ducoin, H. Le Sourne, J.-F. Sigrist	1123 RANS Simulations of Tip Leakage Vortex Cavitation Flows around NACA0009 Hydrofoil Z. Liu, B. Wang	1139 Experience with Small Blade Area Propeller Performance T. Lücke, H. Streckwall
12.00	12.30	1245 Hydro-elastic analysis of a propeller using CFD and FEM co-simulation V. Nieminen	1144 The Study of Tip Vortex Flow and Cavitation Inception on an Elliptical Hydrofoil X. Peng, L. Xu, Y. Cao	1191 Simulate the PPTC propeller with a vortex particle-boundary element hybrid method Y. Wang, M. Abdel-Maksoud, P. Wang, B. Song
12.30	13.00	1229 Hydrodynamic design and model testing techniques for composite ship propellers G.-J. Zondervan, N. Grasso, W. Lafeber	1200 An Investigation into Computational Modelling of Cavitation in a Propeller's Slipstream N. Yilmaz, M. Khorasanchi, M. Atlar	1224 Panel method for ducted propellers with sharp and round trailing edge duct with fully aligned wake on blade and duct S. Kim, W. Du, S. Kinnas
13.00	14.00	<i>Lunch</i>		
14.00	16.00	Wed3A Session 11A CRP Analysis/Plenary room Edison 1 Session Chair: João Manuel Baltazar	Wed3B Session 11B Tip Loaded/Room Edison 2 Session Chair: Spyros A. Kinnas	Wed3C Session 11C Ocean Turbines. Ventilation. Partially Submerged/Room Ollila Session Chair: Kouros Koushan
14.00	14.30	1230 Application of a BEM/RANS Interactive Method to Contra-Rotating Propellers Y. Su, S.A. Kinnas, H. Jukola	1160 Investigation of Prediction Methods for Tip Rake Propellers R. Klose, R. Schulze, K. Hellwig-Rieck	1219 A Generalised Boundary Element Method to Analyse Marine Current Turbines Hydrodynamics Including Flow Separation and Stall F. Salvatore, Z. Sarichloo, D. Calcagni
14.30	15.00	1244 Numerical Investigation of Multi-Component Podded Propulsor Performance in Straight Flow A. Sanchez-Caja, T. Rauti, K. Ramstedt, T. Sipilä	1121 Effective measures of eliminating propeller-hull vortex cavitation H. Huang, Z. Dong, Q. Xue, S. Huang	1173 Numerical Study of Propeller Ventilation C. Yvin, P. Muller, K. Koushan
15.00	15.30	1122 Full Scale Performance Prediction Method for a Ship with ContraRotating Propellers Y. Inukai, J. Ando	1187 CFD Analysis of Scale Effects on Conventional and Tip-Modified Propellers K.W. Shin, P. Andersen	1151 Evaluation of Different Numerical and Analytical Strategies to Analyze a Ducted Marine Current Turbine B.G. Knight, R. Freda, Y.L. Young, K.J. Maki
15.30	16.00	1125 Hybrid Design Method for a Generic Counter-Rotating Propeller E. Güngör	1114 Open Water results comparison for three propellers with transition model, applying crossflow effect, and its comparison with experimental results A. Moran Guerrero, J. González Adalid, M. Pérez Sobrino, L.M. González Gutiérrez	1211 Numerical Study on the Performance of a Partially Submerged Propeller in Bollard Condition K.-J. Paik
16.00	16.20	<i>Coffee break</i>		
19.00	22.00	Dinner at NJK		

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Thursday 15th June

9.00	10.30	Thu1A Session12A Acoustics/Vibration/Plenary room Edison 1 Session Chair: Tuomas Petteri Sipilä	Thu1B Session 12B Podded Propulsors/Room Edison 2 Session Chair: Tomi Veikonheimo	
9.00	9.30	1170 Case Study for the Determination of Propeller Emitted Noise by Experimental and Computational Methods L. Kleinsorge, S. Schemmink, R. Klose, L. Greitsch	1208 Unsteady Loads on an Azimuth Thruster in Off-design Conditions P. Schiller, K. Wang, M. Abdel-Maksoud, M. Palm	
9.30	10.00	1217 Numerical Prediction of Acoustic Noise Level Induced by Cavitation on Ship Propeller at Behind-Hull Condition K. Fujiyama, Y. Nakashima	1104 The optimization of podded propeller and its azimuthing hydrodynamic performance S. Zhai, J. Zhou, Y. Jin	
10.00	10.30	1133 The numerical prediction of the propeller cavitation and hull pressure fluctuation in the ship stern using OpenFOAM C. Zheng	1169 Dynamic versus static CFD of Azipod® oblique flow hydrodynamic loads M.A. Nuutinen, P.P.J. Miettinen	
10.30	10.50	Coffee break		
10.50	12.50	Thu2A Session 13A Ducted Propellers/Plenary room Edison 1 Session Chair: Jun Ando	Thu2B Session 13B Hydroelasticity/Composite Propellers/Room Edison 2 Session Chair: Antoine Ducoin	Thu2C Session 13C Energy Saving Devices. Submarine/Self-propulsion/Room Ollila Session Chair: Vladimir Krasilnikov
10.50	11.20	1162 Influence of Hydrodynamic Interaction between Ducted Propellers and Struts on Performance of Azimuth Thrusters I. Funeno	1203 Validation of a steady BEM-FEM coupled simulation with experiments on flexible small scale propellers P. Maljaars, N. Grasso, M. Kaminski, W. Lafeber	1177 Development of numerical methods for marine propeller – pre-swirl stator system design and analysis P. Król, T. Bugalski, M. Wawrzusiszyn
11.20	11.50	1128 Long Tunnel Configurations for High Efficiency Thrusters S. Brizzolara, E. Brizzolara	1231 The influence of bend-twist coupling on the dynamic response of cavitating composite hydrofoils B.W. Pearce, P.A. Brandner, N. Garg, Y.L. Young, A.W. Phillips, D.B. Clarke	1192 Development of the Wärtsilä EnergoFlow : An innovative energy saving device A. Voermans
11.50	12.20	1188 Prediction of the Open-Water Performance of Ducted Propellers With a Panel Method J.M. Baltazar, D. Rijpkema, J. Falcão de Campos, J. Bosschers	1119 Effect of material design parameters on the forced vibration response of composite hydrofoils in air and in water A.W. Phillips, R. Cairns, C. Davis, P. Norman, P.A. Brandner, B.W. Pearce, Y.L. Young	1158 Numerical Study of Propeller Diameter Effects for a Self-Propelled Conventional Submarine D. Norrison, K. Petterson, W. Sidebottom
12.20	12.50		1207 Experimental Measurements and Inverse Modeling of the Dynamic Loads and Vibration Characteristics of a Surface-Piercing Hydrofoil C. Harwood, J. Ward, M. Felli, M. Falchi, S. Ceccio, Y.L. Young	1136 Four Quadrant Thrust and Torque Prediction of INSEAN E-1619 Generic Submarine Propeller for Submarine Maneuvering Simulations S. Burunsuz, M.C. Özden, Y. Arıkan Özden, I.H. Helvacioğlu
12.50	13.00	Closing		
13.00	14.00	Lunch		