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VICE RECTOR of Research and Lifelong Education
NATIONAL TECHNICAL UNIVERSITY OF ATHENS
School of Naval Architecture and Marine Engineering
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DATE OF BIRTH

March 22, 1966

EDUCATION

National Technical University of Athens
School of Naval Architecture and Marine Engineering
DOCTOR OF PHILOSOPHY
Offshore Structures Technology
Awarded July 15, 1997

National Technical University of Athens
School of Naval Architecture and Marine Engineering
DIPLOMA IN NAVAL ARCHITECTURE AND MARINE ENGINEERING
Awarded September 23, 1990

APPOINTMENTS

September 2016 -: National Technical University of Athens
Professor, School of Naval Architecture and Marine Engineering

March 2010 – August 2016: National Technical University of Athens
Associate Professor, School of Naval Architecture and Marine Engineering

April 2014 – April 2016: University of East Anglia, Norwich, UK
Professor (MTH), Marie Curie Research Fellow, Intra-European Fellowships for Outstanding Researchers under the project:
SAFEMILLS “Increasing safety of offshore wind turbines operation: Study of the violent wave loads”

October 2011 – November 2011: Ecole Centrale Marseille, France
Visiting Professor (Maître de Conférences)

March 2005 – March 2010: National Technical University of Athens
Assistant Professor, School of Naval Architecture and Marine Engineering

May 2008 – June 2008: Ecole Centrale Marseille, France
Visiting Professor (Maître de Conférences)

October 2006 – November 2006: NTNU, Trondheim, Norway
Visiting Professor, Centre of Ships and Ocean Structures

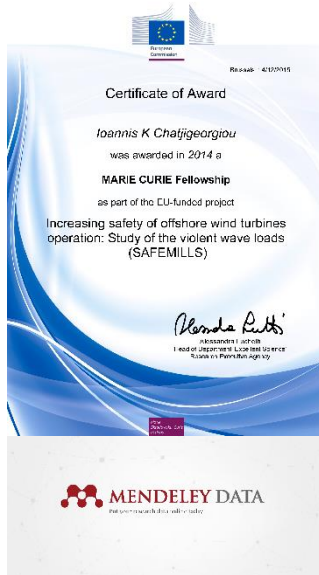
February 2001 – March 2005: National Technical University of Athens
Lecturer, School of Naval Architecture and Marine Engineering

January 1997 – February 2001: ELTRAK S.A. (Caterpillar Inc.)
Service Manager, Marine and Industrial Division

March 1999 – August 1999: National Technical University of Athens
Teaching Associate, School of Naval Architecture and Marine Engineering

January 1991 – December 1997: National Technical University of Athens
Research Engineer, School of Naval Architecture and Marine Engineering

AWARDS/DISTINCTIONS



Marie Curie Intra-European Fellowship for Outstanding Researchers, April 2014 – April 2016.

Participation in the list of 2% top researchers worldwide published in PLoS Biology, Mendeley Data 2020, 8-10-2020 (<http://dx.doi.org/10.17632/btchxktzyw.2>)

RESEARCH INTERESTS

- Linear and nonlinear hydrodynamics of floating structures
- Hydrodynamic violet slamming
- Hydroelasticity
- Wave-current and wave resistance problems
- Environmental loading and response of floating structures
- Cable and slender structure dynamics
- Dynamics of pipes with axial flow
- Numerical methods in line dynamics
- Design and analysis of mooring systems
- Hydromechanic analysis of moored floating structures
- Offshore renewable energy systems

TEACHING

National Technical University of Athens, School of Naval Architecture and Marine Engineering, Undergraduate program

Dynamics of Marine Structures (compulsory 6th semester)

Mooring Systems for Floating Structures (elective 9th semester)

Health and Safety in Shipbuilding (elective 8th semester)

National Technical University of Athens, School of Naval Architecture and Marine Engineering, Postgraduate program

Environmental Conditions and Loading on Offshore Structures (1st semester)

Hydromechanic Analysis and Design of Moored Floating Structures (2nd semester)

Dynamic Behaviour of Floating Structures (2nd semester)

PhD SUPERVISION

Stefanos A. Katifeoglou, *Hydroelastic Behaviour of Structural Elements under Extreme Loading Conditions, Focusing on Marine Applications*, School of Naval Architecture and Marine Engineering, National Technical University of Athens; awarded, January 2016 (Completed).

Theodosis D. Tsaousis, *Development of Smoothed Particle Hydrodynamics (SPH) Methods for the Determination of Extreme Hydrodynamic Loading Conditions and Employment in Hydroelastic Models of Marine Structures*, School of Naval Architecture and Marine Engineering, National Technical University of Athens (Ongoing).

Eirini Anastasiou, *Hydrodynamic Interactions of Semi-Immersed Orthotropic Shapes Using Linear and Non-Linear Wave Theories*, School of Naval Architecture and Marine Engineering, National Technical University of Athens (Ongoing).

PROFESSIONAL AND ACADEMIC ACTIVITIES

MEMBER IN SCIENTIFIC AND PROFESSIONAL SOCIETIES

The Hellenic Technical Chamber

The Hellenic Society of Naval Architects

The Hellenic Institution of Marine Technology

The Royal Institution of Naval Architects

The American Society of Mechanical Engineers (ASME)

MEMBER IN EDITORIAL BOARDS

Member of the Editorial board of Mathematics (MDPI) 2021 -

Guest Editor of the Special Issue "Wind and Wave Renewable Energy Systems", Fluids, MDPI (ISSN 2311-5521).

Member of the Editorial board of Applied Ocean Research (Elsevier) 2012-

Associate Editor Journal of Offshore Mechanics and Arctic Engineering (JOMAE – ASME) 2015-2019.

Guest editor (Associate) of the special issue Mathematical Modeling of Marine Structures, Journal of Applied Mathematics, Hindawi Publishing Corporation, 2011-2012.

ORGANIZATION OF CONFERENCES

Co-organizer of the 26th International Workshop of Water Waves and Floating Bodies, held in Athens, Greece, 17-20 April 2011.

Member of the local organizing committee for the 24th International Conference on Offshore Mechanics and Arctic Engineering (OMAE 2005), ASME, Halkidiki, Greece, 12-17 June 2005.

REVIEWER FOR PUBLISHERS

Cambridge University Press (Ocean Waves and Oscillating Systems, by Johannes Falnes and Adi Kurniawan, 2nd edition)

Elsevier (Introduction to the Dynamics and Control of Ocean Wave Energy Converters, Ossama Abdelkhalik)

REVIEWER INVITATIONS IN PEER-REVIEWED INTERNATIONAL JOURNALS

Acta Mechanica (Springer); Advances in Mechanical Engineering (Hindawi); Applied Mathematics and Computation (Elsevier); Applied Mathematical Modelling (Elsevier); Applied Ocean Research (Elsevier); Archives of Acoustics (Polish Academy of Sciences) ; Brodogradnja (Shipbuilding) (University of Zagreb); China Ocean Engineering (Springer); Coastal Engineering (Elsevier); Coastal Engineering Journal (Taylor & Francis); Computation (MDPI AG publishers); Computers &

Fluids (Elsevier); Computer Physics Communications; Computers and Structures (Elsevier); Differential Equations and Dynamical Systems (Springer); Energy and Environment (SAGE journals); Engineering (Chinese Academy of Engineering - Elsevier); Engineering Analysis with Boundary Elements (Elsevier); Engineering Structures (Elsevier); Environmental Processes (Springer); European Journal of Mechanics A/Solids (Elsevier); European Journal of Mechanics B/Fluids (Elsevier); Finite Element Analysis and Design (Elsevier); Fluids (MDPI); Fractal Fract (MDPI); International Journal of Computational Methods (Worldscientific); International Journal of Heat and Mass Transfer (Elsevier); International Journal of Mechanical Sciences (Elsevier); International Journal of Naval Architecture and Ocean Engineering (Elsevier); International Journal of Nonlinear Mechanics (Elsevier); International Journal of Solids and Structures (Elsevier); Journal of Computational Science (Elsevier); Journal of Engineering for the Maritime Environment (SAGE journals); Journal of Engineering Mathematics (Springer); Journal of Fluid Mechanics (Cambridge University Press); Journal of Fluids and Structures (Elsevier); Journal of Hydraulic Research (Taylor and Francis); Journal ISA Transactions (Elsevier); Journal of Marine Engineering and Technology (Taylor & Francis); Journal of Marine Science and Application (Springer); Journal of Marine Science and Technology (Springer); Journal of Marine Science and Engineering (MDPI AG Publishers); Journal of Mechanical Engineering (Strojniški vestnik); Journal of Mechanical Science and Technology (Springer); Journal of Natural Gas Science & Engineering (Elsevier); Journal of Offshore Mechanics and Arctic Engineering (ASME); Journal of Pipeline Systems (ASCE); Journal of Quantitative Spectroscopy and Radiative Transfer (Elsevier); Journal of Ship Research (SNAME); Journal of Sound and Vibration (Elsevier); Journal of Vibration and Acoustics (ASME); Journal of Vibration and Control (SAGE journals); Journal of Waterway, Port, Coastal and Ocean Engineering (ASCE); Mathematical Problems in Engineering (Hindawi); Marine Structures (Elsevier); Meccanica (Springer); Mechanics Research Communications (Elsevier); Nonlinear Dynamics (Springer); Ocean Engineering (Elsevier); Ocean Modelling (Elsevier); Partial Differential Equations in Applied Mathematics (Elsevier); Physics of Fluids (AIP); Physical Review Fluids (APS Physics); Proceedings of the Royal Society A; Renewable Energy (Elsevier); SN Applied Sciences (Springer); Shock and Vibration (IOS press); Ships and Offshore Structures (Taylor & Francis); Solid Dynamics and Earthquake Engineering (Elsevier); The Scientific World Journal (Hindawi); Water (MDPI); Wave motion (Elsevier)

MEMBER IN EXPERTS AND SPECIALISTS COMMITTEES

Committee I.2 – Loads. 20th International Ship and Offshore Structures Congress, 2015-2018, Delft, The Netherlands, Liege, Belgium.

Specialists Committee V.8 – Risers and Pipelines. 19th International Ship and Offshore Structures Congress, 2012-2015, 7-10 September 2015, Lisbon, Portugal.

Committee I.1 – Environment. 18th International Ship and Offshore Structures Congress, 2009-2012, 10-13 September 2012, Rostock, Germany.

Specialists Committee V.2 – Floating Production Systems. 17th International Ship and Offshore Structures Congress, 2006-2009, 16-21 August 2009, Seoul, South Korea.

Specialists Committee V.2 – Floating Production Systems. 16th International Ship and Offshore Structures Congress, 2003-2006, 20-25 August 2006, Southampton, UK.

INVITED SPEAKER

- ✓ Special workshop “Experimental Flow Analysis Techniques Versus CFD” organized by the French company SIREHNA during the meeting of the FLOATTECH Thematic Network, Nantes, France, April 8, 2005.
- ✓ Centre of excellence CeSOS, Department of Marine Technology, NTNU University. The title of the lecture was “A semi-analytical mathematical formulation as a tool for the dynamic analysis of catenary shaped slender structures”, Trondheim, Norway, October 12, 2006.
- ✓ Centre of excellence CeSOS, Department of Marine Technology, NTNU University. The title of the lecture was “Comparison of results from various numerical methods for calculation of dynamic response of catenary risers”, Trondheim, Norway, November 17, 2006.
- ✓ Institut de Recherche sur the Phénomènes Hors Équilibre, École Centrale Marseille. The title of the lecture was “Tracking parametric type instabilities associated with the dynamic behavior of catenary type slender structures”, Marseille, France, June 3, 2008.
- ✓ Bureau Veritas, Paris, France. The title of the lecture was “Review of the methods, technical issues and available software for analyzing the dynamics of slender structures for marine applications”, Bureau Veritas Headquarters, Paris, France, August 28, 2013.
- ✓ Marine Knowledge Exchange Network, UK. Future technology for marine monitoring and governance. The title of the lecture was “Groundbreaking Research: Breaking waves and impacts on marine

architecture”, Hethel Engineering Centre, Norfolk, UK, October 23, 2014.

- ✓ Institut de Recherche sur the Phénomènes Hors Équilibre, École Centrale Marseille, France. The title of the lecture was “3D steep wave impact on a vertical cylinder”, Marseille, France, January 20, 2015.
- ✓ University of Bologna, Winter Course on Offshore and Marine Systems Engineering. The tile of the lecture was “Analysis and design of floating structures”, Ravenna, Italy, March 10, 2015.
- ✓ Tel Aviv University, School of Mechanical Engineering Seminar. The title of the lecture was “Three-dimensional steep wave impact on a vertical cylinder”, Tel Aviv, Israel, June 8, 2015.
- ✓ University of East Anglia, School of Mathematics. The title of the lecture was “Ellipsoidal harmonics and their applications”, Norwich, UK, October 19, 2015.
- ✓ University of Southampton, Faculty of Engineering and Environment. The title of the seminar was “Hydrodynamic slamming: General aspects and solution methods”, Southampton, UK, February 11, 2016.
- ✓ University of Thessaly, Department of Civil Engineering. The title of the seminar was “Wave trapping in arrays of elliptical cylinders”, Volos, Greece, May 3, 2017.
- ✓ CNR-INSEAN Istituto Nazionale per Studi ed Esperienze di Architettura Navale Vasca Navale. The title of the lecture was “Aspects of hydrodynamic interaction in a hybrid jacket for wind-wave energy harvesting”, Rome, Italy, January 23, 2018.
- ✓ 2nd Energy Tech Forum organized by the Institute of Energy for South-East Europe – IENE in Eugenides Foundation. The title of the presentation was “A hybrid platform for wind/wave energy co-production in large water depths”, Athens, November 27, 2017.
- ✓ 4th International Seminar on Energy and Shipping organized by the Institute of Energy for South-East Europe – IENE during the Posidonia 2018 exhibition. The title of the seminar was “Offshore sustainable energy infrastructure and its importance in enhancing the shipbuilding industry in Greece”, Athens, June 8, 2018.
- ✓ 3rd Energy Tech Forum organized by the Institute of Energy for South-East Europe – IENE in Eugenides Foundation. The title of the presentation was “Recent developments and trends in offshore energy harvesting”, Athens, October 18, 2018.
- ✓ Special Workshop organized by the PELAGOS – Interreg MED project under the auspices of the Hellenic Center of Renewable Energy Sources & Saving (CRES). The title of the presentation was “Marine

energy renewable systems: An engineering miracle”, Athens, Greece, December 11, 2018.

- ✓ First Regional Conference of Maritime Education and Training Providers under the auspices of MENTOR Project and the University of Cyprus. The title of the lecture was “Enhancing blue growth skills – The InnoBlueGrowth case”, Nicosia, Cyprus, February 18, 2019.
- ✓ Special Workshop “Blue Energy Lab” organized by the MAESTRALE – Interreg MED project under the auspices of the Cyprus Oceanography Center. The title of the presentation was “Offshore Wind Energy”, Nicosia, Cyprus, March 1, 2019.
- ✓ Final International Conference & Joint exhibition on Blue energy & Transnational Forum on MRE and Blue energy under the PELAGOS Project and the auspices of the Hellenic Center of Renewable Energy Sources & Saving (CRES). The title of the presentation was “The InnoBlueGrowth project – Main outputs”, Athens, June 25, 2019.
- ✓ University of East Anglia. The title of the lecture to the Applied Mathematics Research Seminar was “Boundary value problems with mixed conditions in violent hydrodynamic slamming”, Norwich, UK, May 13, 2021.

List of publications

1 Thesis

- 1.1 Chatjigeorgiou, I.K. (1997), Nonlinear dynamic analysis of high- and low-tension wire and synthetic mooring cables, PhD Thesis, National Technical University of Athens, School of Naval Architecture and Martine Engineering, June 1997 (in Greek).
- 1.2 Chatjigeorgiou, I.K. (1990) Dynamic behaviour of a moored axisymmetric body exposed to the action of waves and steady current, Diploma Thesis, National Technical University of Athens, School of Naval Architecture and Martine Engineering, June 1990 (in Greek).

2 Journal publications

- 2.1 Anastasiou, E.I., Chatjigeorgiou, I.K. (2022) The radiation problem of a submerged oblate spheroid in finite water depth using the method of the image singularities system, *Fluids* 7, 133.

- 2.2 Konispoliatis, D.N., Chatjigeorgiou, I.K., Mavrakos, S.A. (2022) Hydrodynamics of a moored permeable vertical cylindrical body, *Journal of Marine Science and Engineering*, 10, 403.
- 2.3 Mazarakos, T.P., Tsaousis, T.D., Mavrakos, S.A., Chatjigeorgiou, I.K. (2022) Analytical investigation of tension loads acting on a TLP floating wind turbine, *Journal of Marine Science and Engineering*, 10(3), 318.
- 2.4 Konispoliatis, D.N., Chatjigeorgiou, I.K., Mavrakos, S.A. (2021) Theoretical hydrodynamic analysis of a surface-piercing porous cylindrical body, *Fluids*, 6(9) 320.
- 2.5 Loukogeorgaki, E., Michailides, C., Lavidas, G., Chatjigeorgiou, I.K. (2021) Layout optimization of heaving wave energy converters linear arrays in front of a vertical wall, *Renewable Energy*, 179, 189-203.
- 2.6 Tsaousis, T.D., Chatjigeorgiou, I.K. (2021) Higher order phenomena with the two-dimensional breaking wave impact on a vertical impermeable wall with air entrapment, *European Journal of Fluids / B Fluids*, 89, 180-190.
- 2.7 Anastasiou, E.I., Chatjigeorgiou, I.K. (2021) Hydrodynamics of a submerged oblate spheroid in finite water depth using the method of ultimate image singularities, *Applied Ocean Research*, 111, 102636.
- 2.8 Vafeas, P., Sten, J.C.-E., Chatjigeorgiou, I.K. (2021) On the electrostatic potential for the two-hyperboloid and double-cone of a single sheet with elliptic cross-section, *Quarterly Journal of Mechanics and Applied Mathematics*, 74, 117-135.
- 2.9 Anastasiou, E.I., Loukogeorgaki, E., Chatjigeorgiou, I.K. (2020) The method of image singularities employed for oscillating oblate spheroids under a free surface, *Fluids*, 5, 75.
- 2.10 Michailides, C., Loukogeorgaki, E., Chatjigeorgiou, I.K. (2020) Wave exciting force maximization of truncated cylinders in a linear array, *Energies*, 13, 2400.
- 2.11 Tsaousis, T.D., Chatjigeorgiou, I.K. (2020) An analytical approach for the two-dimensional plunging breaking wave impact on a vertical wall with air entrapment, *Fluids*, 5, 58.
- 2.12 Konispoliatis, D.N., Chatjigeorgiou, I.K., Mavrakos, S.A. (2020) Near trapped phenomena in an array of truncated cylinders in a perpendicular arrangement in front of a vertical breakwater, *Applied Mathematical Modeling*, 83, 497-525.
- 2.13 Chatjigeorgiou, I.K., Loukogeorgaki, E., Anastasiou, E., Mantadakis, N. (2020) Ultimate image singularities in oblate spheroidal coordinates with applications to hydrodynamics, *Journal of Marine Science and Engineering*, 8, 32.

- 2.14 Loukogeorgaki, E., Boufidi, I., Chatjigeorgiou, I.K. (2020) Performance of an array of oblate spheroidal heaving wave energy converters in front of a wall, *Water*, 12, 188.
- 2.15 Chatjigeorgiou, I.K. (2020) Nonlinear dynamics of statically displaced tendons with non-conventional end conditions, *Applied Mathematical Modelling*, 81, 211-231.
- 2.16 Tsaousis, T.D., Papadopoulos, P.K., Chatjigeorgiou, I.K. (2020) A semi-analytical solution for the three-dimensional Wagner steep wave impact on a vertical circular cylinder, *Applied Mathematical Modelling*, 77, 902-921.
- 2.17 Loukogeorgaki, E., Chatjigeorgiou, I.K. (2019) Hydrodynamic performance of an array of truncated cylinders in front of a vertical wall, *Ocean Engineering*, 189, 106407.
- 2.18 Chatjigeorgiou, I.K. (2019) An analytical approach for the three-dimensional water entry problem of solids creating elliptical contact regions, *Journal of Fluids and Structures*, 91, 102703.
- 2.19 Chatjigeorgiou, I.K. (2019) Semi-analytical solution for the water wave diffraction by arrays of truncated circular cylinders in front of a vertical wall, *Applied Ocean Research*, 88, 147-159.
- 2.20 Chatjigeorgiou, I.K., Chatziioannou, K., Mazarakos, T. (2019) Near trapped modes in a long array of truncated circular cylinders, *Journal of Waterway, Port, Coastal and Ocean Engineering*, 145(1): 04018035
- 2.21 Chatjigeorgiou, I.K. (2018) Water wave trapping in a long array of bottomless circular cylinders, *Wave Motion*, 83, 25-48.
- 2.22 Miloh, T., Chatjigeorgiou, I.K. (2018) Fundamental problems in hydrodynamics of ellipsoidal forms, *Journal of Hydrodynamics*, 30(3), 774-786.
- 2.23 Chatjigeorgiou, I.K., Katsardi, V. (2018) Hydrodynamics and near trapping effects in arrays of multiple elliptical cylinders in waves, *Ocean Engineering*, 157C, 121-139.
- 2.24 Chatjigeorgiou, I.K., Korobkin, A.A., Cooker, M.J. (2017) Three-dimensional steep wave impact on a vertical plate with an open rectangular section, *International Journal of Mechanical Sciences*, 133C, 260-272.
- 2.25 Chatjigeorgiou, I.K., Miloh, T. (2017) Hydrodynamics of non-axisymmetric oblate spheroids below a free surface, *Journal of Ocean Engineering and Marine Energy*, 3, 125-138.
- 2.26 Chatjigeorgiou, I.K. (2017) Hydroelastic response of marine risers subjected to internal slug-flow, *Applied Ocean Research*, 62, 1-17.

- 2.27 Chatjigeorgiou, I.K., Cooker, M.J., Korobkin, A.A. (2016) Three-dimensional water impact at normal incidence to a blunt structure, *Proc Royal Society A* 472, 20150849.
- 2.28 Chatjigeorgiou, I.K. (2016) A note on mixed boundary value problems involving triple trigonometrical series, *Applied Mathematics Letters*, 57, 25-31.
- 2.29 Chatjigeorgiou, I.K., Korobkin, A.A., Cooker, M.J. (2016) Three-dimensional steep wave impact on a vertical cylinder, *Journal of Hydrodynamics*, 28, 523-533.
- 2.30 Doschoris, M., Dassios, G., Vafeas, P., Kariotou, F., Chatjigeorgiou, I.K. (2015) Revisiting a numerical implementation of the EEG problem in ellipsoidal geometry, *Pioneer Journal of Advances in Applied Mathematics*, 14(1-2), 35-51.
- 2.31 Katifeoglou, S., Chatjigeorgiou, I.K. (2015) A shell-dynamics model for pipelines of large suspended length, *Ocean Systems Engineering*, 5, 301-318.
- 2.32 Chatjigeorgiou, I.K., Dassios, G., Miloh, T. (2015) Hydrodynamics of orthotropic shapes utilizing ellipsoidal harmonics, *Pioneer Journal of Advances in Applied Mathematics*, 13(1-2), 31-69.
- 2.33 Katifeoglou, S., Chatjigeorgiou, I.K. (2015) Dynamics of shell-like tubular segments at the sagbend region of a Steel Catenary Riser, *Ships and Offshore Structures*, DOI: 10.1080/17445302.2015.1074644
- 2.34 Dassios, G., Chatjigeorgiou, I.K. (2015) Computation of higher order ellipsoidal harmonics with an application in electroencephalography, *Quarterly Journal of Mechanics and Applied Mathematics*, 68(2), 145-172.
- 2.35 Chatjigeorgiou, I.K., Miloh, T. (2015) Hydrodynamic wave resistance and diffraction problems of submerged prolate spheroids based on a Green's function image singularities method, *European Journal of Mechanics/B Fluids*, 49A, 184-196.
- 2.36 Chatjigeorgiou, I.K., Miloh, T. (2015) Radiation and oblique diffraction by submerged prolate spheroids in water of finite depth, *Journal of Ocean Engineering and Marine Energy*, 1, 3-18.
- 2.37 Chatjigeorgiou, I.K. (2015) Second-order nonlinear dynamics of catenary pipelines subjected to bi-chromatic excitations, *Applied Mathematical Modelling*, 39, 2363-2384.
- 2.38 Perrusson, G., Vafeas, P., Chatjigeorgiou, I.K., Lesselier, D. (2015) Low-frequency on-site identification of a highly-conductive body buried in Earth from a model ellipsoid, *IMA Journal of Applied Mathematics*, 80, 963-980.
- 2.39 Chatjigeorgiou, I.K., Miloh, T. (2014) Free-surface hydrodynamics of a submerged prolate spheroid in finite water depth based on the method of

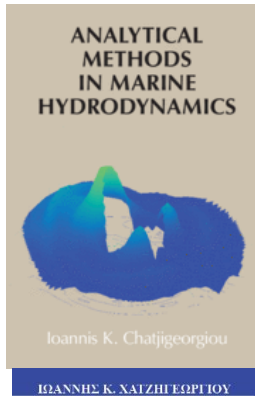
- multipole expansions, *Quarterly Journal of Mechanics and Applied Mathematics*, 67(4), 525-552.
- 2.40 Chatjigeorgiou, I.K., Miloh, T. (2014) Hydrodynamics of submerged prolate spheroids advancing under waves: Wave diffraction with forward speed, *Journal of Fluids and Structures*, 49, 202-222.
- 2.41 Bitner-Gregersen, E.M., Bhattacharya, S.K., Chatjigeorgiou, I.K., Eams, I., Ellermann, K., Ewans, K., Hermanski, G., Johnson, M.C., Ma, N., Maisondieu, C., Nilva, A., Rychlik, I., Waseda, T. (2014) Recent developments of ocean environmental description with focus on uncertainties, *Ocean Engineering*, 86, 26-46.
- 2.42 Molin, B., Kimmoun, O., Remy, F., Chatjigeorgiou, I.K. (2014) Third-order effects in wave-body interaction, *European Journal of Mechanics – B/Fluids*, 47, 132-144.
- 2.43 Chatjigeorgiou, I.K. (2013) Second-order nonlinear dynamics of catenary pipelines: A frequency domain approach, *Computers and Structures*, 123, 1-14.
- 2.44 Chatjigeorgiou, I.K., Miloh, T. (2013) Wave scattering of spheroidal bodies bellow a free surface, *Journal of Ship Research*, 57, 141-154.
- 2.45 Chatjigeorgiou, I.K., Molin, B. (2013) Third-order interactions, wave un-up and hydrodynamic loading on a vertical plate in an infinite wave field, *Applied Ocean Research*, 41, 57-64.
- 2.46 Chatjigeorgiou, I.K. (2013) The hydrodynamics of arrays of truncated elliptical cylinders, *European Journal of Mechanics – B/Fluids*, 37, 153-164.
- 2.47 Chatjigeorgiou, I.K. (2013) Numerical simulation of the chaotic lateral vibrations of long rotating beams, *Applied Mathematics and Computation*, 219, 5592-5612.
- 2.48 Chatjigeorgiou, I.K. (2013) The analytic solution for hydrodynamic diffraction by submerged prolate spheroids in infinite water depth, *Journal of Engineering Mathematics* 81, 47-65.
- 2.49 Chatjigeorgiou, I.K. (2013) Parametric instabilities in the out-of-plane dynamics of catenary-shaped slender structures transporting fluids, *Proceedings of the IMechE, Part M. Journal of Engineering for the Maritime Environment*, 227, 326-342.
- 2.50 Kazangas, D.C., Xiros, N.I., Chatjigeorgiou, I.K. (2013) Reduced-order, nonlinear approximation of catenary riser dynamics using frequency domain identification, *Proceedings of the IMechE, Part M. Journal of Engineering for the Maritime Environment*, 227, 343-356.

- 2.51 Larsen, C.M., Troesch, A., Pesce, C.P., Chatjigeorgiou, I.K. (2012) Mathematical modeling of marine structures, *Journal of Applied Mathematics* (editorial), art. no. 127935.
- 2.52 Katifeoglou, S.A., Chatjigeorgiou, I.K. (2012) Dynamic interaction of catenary risers with the seafloor, *Applied Ocean Research*, 38, 1-15.
- 2.53 Chatjigeorgiou, I.K. (2012) Hydrodynamic exciting forces on a submerged oblate spheroid in regular waves, *Computers and Fluids*, 57, 151-162.
- 2.54 Chatjigeorgiou, I.K., Mavrakos, S.A. (2012) The analytic form of Green's function in elliptic coordinates, *Journal of Engineering Mathematics*, 72, 87-105.
- 2.55 Chatjigeorgiou, I.K. (2011) Three dimensional wave scattering by arrays of elliptical and circular cylinders, *Ocean Engineering*, 38, 1480-1494.
- 2.56 Chatjigeorgiou, I.K. (2010) On the effect of internal flow on vibrating catenary risers in three dimensions, *Engineering Structures* 32, 3313-3329.
- 2.57 Chatjigeorgiou, I.K. (2010) Three dimensional nonlinear dynamics of submerged, extensible catenary pipes conveying fluid and subjected to end-imposed excitations, *International Journal of Non-Linear Mechanics*, 45, 667-680.
- 2.58 Chatjigeorgiou, I.K., Mavrakos, S.A. (2010) An analytical approach for the solution of the hydrodynamic diffraction by arrays of elliptical cylinders, *Applied Ocean Research*, 32, 242-251.
- 2.59 Chatjigeorgiou, I.K. (2010) Linear out-of-plane dynamics of catenary risers, *Proceedings of the IMechE, Part M. Journal of Engineering for the Maritime Environment*, 224, 13-27.
- 2.60 Mavrakos, S.A., Chatjigeorgiou, I.K. (2009), Second-order hydrodynamic effects on an arrangement of two concentric truncated vertical cylinders, *Marine Structures*, 22, 545-575.
- 2.61 Chatjigeorgiou, I.K. (2008), A finite differences formulation for the linear and nonlinear dynamics of 2D catenary risers, *Ocean Engineering*, 35, 616-636.
- 2.62 Chatjigeorgiou, I.K. (2008), Application of the WKB Method for Catenary-Shaped Slender Structures, *Mathematical and Computer Modelling* 48, 249-257.
- 2.63 Chatjigeorgiou, I.K. (2008), Solution of the boundary layer problems for calculating the natural modes of riser-type slender structures, *Journal of Offshore Mechanics and Arctic Eng, JOMAE-ASME*, 130, 011003-1.
- 2.64 Chatjigeorgiou, I.K., Mavrakos, S.A. (2007), Second-order sum-frequency wave diffraction by a truncated surface-piercing cylinder in bichromatic waves, *Journal of Marine Science and Technology* 12, 218-231.

- 2.65 Xiros, N.I., Chatjigeorgiou, I.K. (2007), Nonlinear identification and input-output representation of the modal dynamics of marine slender structures, *Journal of Offshore Mechanics and Arctic Eng, JOMAE-ASME*, 129, 188-200.
- 2.66 Chatjigeorgiou, I.K. (2006), A solution for the linearized dynamic problem of catenary risers, *Journal of Ship Technology Research, Schiffstechnik*, 53, 150-158.
- 2.67 Mavrakos, S.A., Chatjigeorgiou, I.K. (2006), Second-order diffraction by a bottom seated compound cylinder, *Journal of Fluids and Structures*, 22, 463-492.
- 2.68 Chatjigeorgiou, I.K., Mavrakos, S.A. (2006), Semi-analytical formulation of the second-order wave diffraction by a truncated-compound surface-piercing cylinder, *Journal of Ship Technology Research, Schiffstechnik*, 53, 26-38.
- 2.69 Chatjigeorgiou, I.K., Mavrakos, S.A. (2005), Nonlinear resonances of parametrically excited risers-numerical and analytic investigation for $\Omega=2\omega$, *Computers and Structures*, 83, 560-573.
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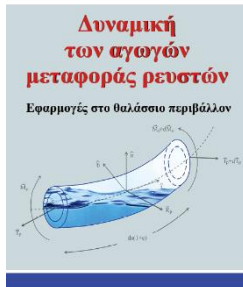
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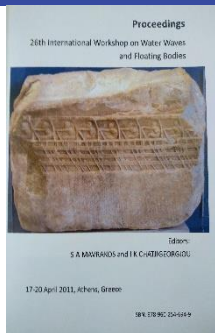


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6 Principal investigator in research projects

- 6.1 Principal co-Investigator, Sector Adaptive Virtual Early Warning System for Marine Pollution, **SEAVIEWS** (2020-2022). Project co-funded by the European Regional Development Fund and the Greek Programme of Public Investments; Budget: **380,735€** (Ongoing).
- 6.2 Principal Investigator, Feasibility Study of Innovated Materials for Offshore Fish Cage Nets – Numerical and Experimental Investigation Under Realistic Loading Conditions, **MATISSE** (2019-2022). Project funded by the Hellenic General Secretariat of Research and Technology; Budget: **200,000€** (Ongoing).
- 6.3 Principal Investigator, Blue Growth Community – Capitalization Project for Blue Economy Innovation in the Mediterranean, **BG2** (2019-2021). Project co-funded by the European Regional Development Fund and the Greek Programme of Public Investments; Budget: **179,995€** (Ongoing).
- 6.4 Principal Investigator, Horizontal Communication & Capitalization Project for the Innovation in Blue Growth at Mediterranean Level, **InnoBlueGrowth** (2016-2019). Project co-funded by the European

- Regional Development Fund and the Greek Programme of Public Investments; Budget: **252,775€** (Completed).
- 6.5 Fellow, Increasing Safety of Offshore Wind Turbines Operation: Study of the Violent Wave Loads, **SAFEMILLS** (2014-2016). Project funded by the FP7 Program PEOPLE, Marie Curie Intra-European Fellowships for Outstanding Researchers; Budget: **~320,000€** (Completed).
- 6.6 Principal Investigator, Hydroelastic Behavior of Vertical and Steel Frames Subjected to Third-Order Hydrodynamic Loading, **HELASFR** (2013-2015). Project funded by the Hellenic General Secretariat of Research and Technology. Budget: **30,000€** (Completed).
- 6.7 Principal Investigator, Solution of the Second-Order Diffraction and Radiation Hydrodynamic Problem of Two Concentric Cylinders for Applications on Wave Energy Conversion (2007-2009). Project funded by the Research Committee of the National Technical University of Athens under the Basic Research Program K. **KARATHEODORI**. Budget: **15,000€** (Completed).
- 6.8 Principal Investigator, Wave-Current Interaction with Multiple Axisymmetric Bodies (2005-2009). Project co-funded by the European Social Fund and National Resources under the **PYTHAGORAS II** program of the Hellenic General Secretariat of Research and Technology. Budget: **50,000€** (Completed).