

SOFIA PEPPA MSC PHD

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Current post

March 2022 - **Associate Professor**, Department of Naval Architecture, University of West Attica, Athens, Greece

QUALIFICATIONS

2012	Ph.D. in Engineering Department of Naval Architecture and Marine Engineering National Technical University of Athens
2005	MSc in Quality Assurance Department of Science and Technology Hellenic Open University
2001	MSc in Naval Technology Department of Naval Architecture and Marine Engineering National Technical University of Athens
1996	Diploma (Bachelor + MEng equivalent) in Naval Architecture and Marine Engineering Department of Naval Architecture and Marine Engineering National Technical University of Athens

EMPLOYMENT/PREVIOUS POSTS

Mar 2018 – Feb 2022	Assistant Professor , Department of Naval Architecture, University of West Attica, Athens, Greece
Feb 2017 – Feb 2018	Assistant Professor , Department of Naval Architecture, Technological Educational Institute of Athens
Mar 2011 – Jan 2017	Lecturer in CASD Design , Department of Naval Architecture, Technological Educational Institute of Athens
Mar 2008 – Jul 2010	Teaching Assistant , Department of Naval Architecture, Technological Educational Institute of Athens

Jan 2006 – Mar 2011	Quality Control Manager , Laboratory for Ship and Marine Hydrodynamics, Department of Naval Architecture and Marine Engineering, NTUA
Jan 2002 – Mar 2011	Laboratory Assistant , Laboratory for Ship and Marine Hydrodynamics, Department of Naval Architecture and Marine Engineering, NTUA
Jul 2000 – Feb 2001	Technical Superintendent
Jun 1998 – Jul 2000	Project Manager , <i>EPEAEK Methods of Upgrading Postgraduate Studies</i> , Department of Naval Architecture Marine Engineering, NTUA
Jun 1996 – Jan 1998	Research assistant , Laboratory for Ship and Marine Hydrodynamics, Department of Naval Architecture and Marine Engineering, NTUA

TEACHING EXPERIENCE

Postgraduate Course

University of West Attica, Department of Naval Architecture

2017- to date	Computational fluid dynamics with applications in Naval Architecture & Marine engineering (MSc Program: Advanced Technologies in Naval Architecture & Marine Engineering)
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Undergraduate Courses

University of West Attica, Department of Naval Architecture

2018- to date	Resistance – Propulsion – Ship hydrodynamics
2018- to date	The Regulation of International Shipping – Environmental Protection
2012- to date	Small Craft Technology
2012- to date	Traditional Ship Design
2014- 2018	Shipyard Installations, Shipping Companies and Classification Societies
2011- 2018	Ship lines Drawing and Introduction to CASD
2012- 2014	Ship Theory I
2012- 2013	Mechanical Eng. Drawing and Introduction to MCAD
2012- 2013	Special Marine Constructions and Sailing Vessels

Technological Educational Institute of Athens

Teaching Assistant, Department of Naval Architecture

2007-2010 Ship lines Drawing and Introduction to CASD

National Technical University of Athens

Teaching Assistant, Department of Naval Architecture and Marine Engineering

2006-2010 Principles of Marine and Naval Hydrodynamics

2006-2010 Fluid Mechanics

2004-2006 & Ship Dynamics and Seakeeping
2001-2002

2002-2004 & Hydrodynamic Design of Small Vessels
1997-1999

2001-2006 Mechanical and Naval Architecture Laboratory I and II

1999-2000 Hydrostatics and Ship Stability

RESEARCH EXPERIENCE

2018-2021

UNIWA, Department of Naval Architecture. Project leader of the research project: NAYS

2005-2008

ISTRAM. Participation as a researcher in the following research projects:

POA (G4RD-CT-2001-00601), SCRACH PHASES I-V, ECOSHAPE (AST3-CT-2003-502884), TATEM (AIP3-CT-2004-502909)

1996-2002

NTUA, Department of Naval Architecture and Marine Engineering. Participation as a researcher in the following research projects:

- Development of high-speed hull series for naval ships operating in Greek seas
- Development of a systematic series of double-chine planing hull forms
- Determination of the propulsion characteristics of traditional vessels-Proposal for improvement
- ACME
- Advance Materials and Design Procedures for Large Size SES Structures
- NAUTIS
- Advanced technology to optimize Maritime operational safety, integration, and interface (ATOMOS II)
- Composite Marine Propellers, (COMARPROP)
- EUROWAVES

Journal Publications – Conference Papers

- Arapakopoulos, A., Liaskos, O., Mitsigkola, S., Papatzanakis, G., Peppas, S., Remoundos, G., Ginnis, A., Papadopoulos, C., Mazis, D., Tsilikidis, O., Yighourtakis, Y., “3D Reconstruction & Modeling of the Traditional Greek Trechadiri: Aghia Varvara,” *Heritage* 2022, 5, 1295-1309. <https://doi.org/10.3390/heritage5020067>
- Liaskos, O., Mitsigkola, S., Arapakopoulos, A., Papatzanakis, G., Ginnis, A., Papadopoulos, C., Peppas, S., Remoundos, G., “Development of the Virtual Reality Application: The Ships of Navarino,” *Applied Sciences* 2022, 12, 3541. <https://doi.org/10.3390/app12073541>
- Peppas, S., Kaiktsis, L., Frouzakis, C., Triantafyllou, G., “Computational Study of Three-Dimensional Flow Past an Oscillating Cylinder Following a Figure Eight Trajectory,” *Fluids* 2021, 6(3), 107. <https://www.mdpi.com/2311-5521/6/3/107>
- Peppas, S., Kaiktsis, L., Frouzakis, C. E., and Triantafyllou, G. S., “Flow past an oscillating cylinder: Effects of oscillation mode on wake structure,” In *Proceedings of the Notes on Numerical Fluid Mechanics and Multidisciplinary Design*; Springer: Berlin/Heidelberg, Germany, 2021.
- Sofia Peppas, “The Importance of Measuring the Performance of IMO Member States,” *SOME2021 – The 7th International Symposium on Ship Operations, Management & Economics*, A Virtual Event, Athens, Greece, 2021
- Pagonis D.N, Kaltsas G., and Peppas S., “Low Cost Measurement System for the Precise Monitoring of the Instantaneous Rotational Speed of an Internal Combustion Engine,” *ALLSENSORS 2020*, In *Proceedings of the 5th International Conference on Advances in Sensors, Actuators, Metering and Sensing*, Valencia, Spain, 2020.
- Pagonis, D.-N., Livanos, G., Theotokatos, G., Peppas, S., and Themelis, N., “Open type ferry safety systems design for using LNG fuel,” *Marine Science and Application*, 15(4), 2016.
- Peppas S., and Triantafyllou, G. S., “Sensitivity of two-dimensional flow past transversely oscillating cylinder to streamwise cylinder oscillations,” *Physics of Fluids* 28(3):037102, 2016.
- Labeas, G., and Peppas, S., “Fatigue crack growth behavior of friction stir welded aluminium alloys,” *Key Engineering Materials* Vol. 665, pp. 89-92, 2016.
- Peppas, S., Kaiktsis, L., and Triantafyllou, G. S., “Hydrodynamic forces and flow structures in flow past a cylinder forced to vibrate transversely and in-line to a steady flow,” *Journal of Offshore Mechanics and Arctic Engineering*, 138(1), 2016.
- Peppas, S., Kaiktsis, L., and Triantafyllou, G. S., “Numerical simulation of three-dimensional flow past a cylinder oscillating at the Strouhal frequency,” *Journal of Pressure Vessel Technology*, Transactions of the ASME, 137(1), 2014.

- Peppas, S., Kaiktsis, L., Frouzakis, C. E., and Triantafyllou, G. S., “Flow past an oscillating cylinder: Effects of oscillation mode on wake structure,” IUTAM Symposium on Critical flow dynamics involving moving/deformable structures with design applications, Santorini, Greece, 2018.
- Peppas, S., Kaiktsis, L., Frouzakis, C. E., and Triantafyllou, G. S., “Computational study of three-dimensional flow past an oscillating cylinder: effects of oscillation mode on flow structure and forces,” ISOPE-2016 Conference, Rhodes, Greece, 2016.
- Triantafyllou, G., and Peppas, S., “Sensitivity of two-dimensional flow past transversely oscillating cylinder to streamwise cylinder oscillations,” Bulletin of the American Physical Society, Vol. 60(21), American Physical Society, 2015.
- Labeas, G., and Peppas, S., “Fatigue crack growth behavior of friction stir welded aluminium alloys,” 14th International Conference on Fracture and Damage Mechanics, Budva, Montenegro, 2015.
- Peppas, S., Kaiktsis, L., Frouzakis, C., and Triantafyllou, G. S., “A comparison of forces in two- and three-dimensional flow past an oscillating cylinder,” Proceedings, ASME 2015 Pressure Vessels and Piping Division Conference, PVP2015-45390, Boston, Massachusetts, USA, 2015.
- Peppas, S., Kaiktsis, L., Triantafyllou, G., “Numerical simulation of three-dimensional flow past an oscillating cylinder”, Proceedings, ASME 2013 Pressure Vessels and Piping Division Conference, PVP2013-97943, Paris, France, 2013.
- Peppas, S., Kaiktsis, L., Triantafyllou, G., “The effect of in-line oscillation on the forces of a cylinder vibrating in a steady flow”, American Society of Mechanical Engineers, Fluids Engineering Division (Publication) FEDSM, Proceedings, 7th International Symposium on Fluid-Structure Interactions, Flow-Sound Interactions, and Flow-Induced Vibration and Noise, Montreal, Québec, Canada, Volume 3 (PARTS A AND B), 2010, pp. 21-28.
- Peppas, S., Kaiktsis, L., Triantafyllou, G., “Chaotic wakes in flow past an oscillating cylinder”, Proceedings, 6th Conference on Bluff Body Wakes and Vortex Induced Vibrations, Capri Island Italy, 2010.
- Triantafyllou, G., Kaiktsis, L., Peppas, S., “Hydrodynamic forces on a cylinder vibrating transversely and in-line to a steady stream”, 61st Annual Meeting of the APS, San Antonio, Texas, 2008.
- Peppas, S., Kaiktsis, L., Triantafyllou, G., “Computational study of flow past an oscillating structure - Flow-structure interaction”, Proceedings, Flow 2008, Kozani, Greece, 2008.
- Peppas, S., Kaiktsis, L., Triantafyllou, G., “Simulation of a flow past a circular cylinder with inflow shear”, Proceedings, 4th Symposium on Bluff Body Wakes and Vortex Induced Vibrations, Santorini Greece, 2005, pp. 211-215.

- Loukakis, T. A., Grigoropoulos, G., Peppas, S., “Propulsion optimization diagrams for fishing vessels”, Proceedings, 8th International Marine Design Conference, IMDC 03, Athens Greece, 2003, Vol. I, pp. 123-135.
- Grigoropoulos, G., Loukakis, T. A., Peppas, S., “Seakeeping performance of high-speed monohulls”, Proceedings, 6th International Marine Design Conference, IMDC 97, Newcastle England, 1997, pp. 539-553.
- Grigoropoulos, G., Loukakis, T. A., Peppas, S., “Seakeeping operability of high-speed monohulls in Aegean Sea”, Proceedings, International Maritime Association of Mediterranean, VIII Congress, Istanbul Turkey, 1997, pp. 1.5-1.10.

Posters and Presentations

- Peppas, S., Kaiktsis, L., Triantafyllou, G. S., “Simulation of a flows past oscillating bluff bodies”, ERCOFTAC Spring Festival Aristotle University of Thessaloniki, April 26th 2018.
- Grigoropoulos, G., Loukakis, T. A., Peppas, S., “Operability of high-speed monohulls in the Aegean sea environment”, Presentation to the Joint Branch of the Royal Institution of Naval Architects and the Institute of Marine Engineers in Greece, Athens, May 23rd 1996.

PROFESSIONAL AFFILIATIONS

- Member of The Greek Chamber
- Member of Hellenic Society of Naval Architects
- Working Group "Protection and Promotion of Traditional boat and wooden shipbuilding Art of Greek Area ", Ministry of Culture and Sports

LANGUAGES

English: Fluent

German: Basic