ASST. PROF. IOANNIS TIGKAS

PERSONAL INFORMATION:

ADDRESS: Voula 16673, Athens, Greece
E-MAIL: itigkas@uniwa.gr
DATE OF BIRTH: 08/06/1978 | NATIONALITY: Hellenic

WORK EXPERIENCE:

Jul 2020 – Currently — UNIVERSITY OF WEST ATTICA, School of Engineering, Dept. of Naval Architecture, Athens, Greece.

- Assistant Professor in *Nonlinear Dynamic Stability of Ships* and *Shipping Risk Management*

Mar 2014 – Jul 2020 — STREAMLINED NAVAL ARCHITECTS Ltd., Perama, Greece

- Technical Manager
- Involvement in research project funded by *EU Horizon 2020 SME Instrument* (https://ec.europa.eu/eipp/desktop/en/projects/project-279.html)

Oct 2011 – Feb 2014 — THENAMARIS SHIPS MANAGEMENT INC., Athens, Greece

- Newbuilding plan approval, negotiations with Yards and technical follow-up during construction
- Research projects for the improvement of ships' fuel efficiency
- Assistant Site Manager in *NB* projects in China performing also machinery, hull outfitting and hull inspections

Feb 2010 – Jun 2012 — BCA/ LONDON METROPOLITAN UNIVERSITY, Athens, Greece

- Part-time Lecturer in *Shipping Finance Policy & Shipping Risk Management*
- Supervisor of final year dissertations

Mar 2010 – Mar 2011 — HELLENIC REGISTER OF SHIPPING, Piraeus, Greece

- Engineer at the R&D Department, involved with Rule Development and research projects
- Plan Approval Engineer (Hull) including FEA methods

Sep 2003 – Dec 2009 — NATIONAL TECHNICAL UNIVERSITY OF ATHENS (NTUA), Athens, Greece

- Research scientist involved in *EU* and national funded research projects
- Simulation and investigation of well-known ship accidents
- Lecturing and laboratory demonstration assistant at the *School of Naval Architecture and Marine Engineering*
- Assisted the supervision of *Diploma* and *MSc Theses*

Jan 2003 – Dec 2006 — NAVIGATION MARITIME SHIPPING LTD, Athens, Greece

- Assistant Superintendent engineer Superintendent engineer
- Supervisions, inspections, providing on-site effective engineering solutions, writing-up specifications, negotiating with shipyards and their agents, estimating ship-repair costs and project budgeting

Mar 2008 – Feb 2009 — HELLENIC NAVY, Naval Base of Souda, Crete, Greece

- Military service as a Naval Architect and Marine Engineer at the Technical Department's Design Office
- Mainly involved with retrofit studies and supervision of repair works

Summer 1999 — LLOYD'S REGISTER OF SHIPPING, London, England

- Internship in the Construction Services Department in London headquarters. Main responsibilities included assessing ships in accordance to *IACS-URS* structural requirements and providing appropriate measures for rule compliance.

EDUCATION:

Apr 2003 – Dec 2009 — NATIONAL TECHNICAL UNIVERSITY OF ATHENS (NTUA), Greece

Doctor of Engineering in Naval Architecture and Marine Engineering

- PhD Thesis: "*Nonlinear Dynamic Analysis of the Directional Instability of Ships in Wind and Waves*" (Supervisor: Prof. K. Spyrou)
- "*Alexander S. Onassis*" Public Benefit Foundation Scholarship | "*Thomaidio*" Award for exceptional paper 2005 & 2008

Sep 2001 – Oct 2002 **CITY UNIVERSITY OF LONDON BUSINESS SCHOOL, England**

MSc in Shipping, Trade and Finance (*Mark: 68.7%*)

- "*John A. Hadjipateras*" Scholarship, awarded by Anne, Princess Royal at *Seatrade Awards*

Sep 1997 – Sep 2001 **UNIVERSITY OF NEWCASTLE UPON TYNE, Department of Marine Technology, England**

MSc in Marine Technology (*with Distinction*)

BEng in Naval Architecture (*1st Class Honours*)

- "*Lloyd's Register of Shipping*" Sponsorship 98/99 & 99/00 | "*Tachmindji*" Hydrodynamics Medal-2000 | "*MacGregor-Navaire*" Prize-2000 | Finalist of the "*2000 RINA–BAE*" Student Naval Architect Award

PROFESSIONAL QUALIFICATIONS:

LLOYD'S REGISTER OF SHIPPING, Piraeus, Greece

Mar 2009 - Marine Management System Auditor Certificate (Internal LR training for ISM/ISPS Auditors)

Feb 2010 - Hull Inspection, Damage and Repair Certificate

THE WELDING INSTITUTE, England

May 2000 - Certificate in Welding and Joining Technology

CITY & GUILDS OF LONDON INSTITUTE (Obtained at Newcastle College, England)

Sep 1997 – Jun 2001 Computer Aided Engineering – Part 2 | Advanced CAD – Part 3 | Engineering *NC/CNC* Part Programming – Part 3 | Pro/Engineer Advanced Modelling & Assembly

PERSONAL SKILLS:

Languages • Greek (native speaker) • English (fluently) • German (basic)

Computing skills Competent in *AutoCAD* , *SolidWorks* with FEA/Flow, *Pro-ENGINEER*, *Plant-3D*, *FEMAP-Siemens* PLM, *FINEL*, *Alpha* CAM, *SWAN* II, *Trident FD* - Waveload, *Hydromax-Maxsurf*, STAR CCM+, *Mathematica*, *MatLAB*, *Fortran*

MEMBERSHIPS:

- RINA *(Corporate Member)*
- SNAME *(Member)*
- International Stability R&D Committee - SRDC *(Member)*
- Professional Engineer of the Technical Chamber of Greece - *TEE*
- Chartered Engineer (*CEng*) of the UK Engineering Council – Member No. 577927

PUBLICATIONS:

In international journals:

Tigkas I. & Spyrou K. J. (2023): Hybrid surging and surf-riding motions of a ship in steep Bi-chromatic following seas. *Ocean Engineering*, Vol. 269, Issue 113522, Elsevier Press, 1-15.

Spyrou K. and Tigkas I. (2011): Nonlinear Surge Dynamics of a Ship in Astern Seas: "Continuation Analysis" of Periodic States with Hydrodynamic Memory, *Journal of Ship Research*, Vol. 55, No 1, 19-28.

Spyrou K J., Tigkas I., Scanferla G., Pallikaropoulos N. and Themelis N. (2008): Prediction Potential of the Parametric Rolling Behaviour of a Post-Panamax Containership. *Ocean Engineering*, Vol. 35, Issues 11-12, Elsevier Press, 1235-1244.

Spyrou K., Tigkas I. and Chatzis A. (2007): Dynamics of a Ship Steering in Wind Revisited, *Journal of Ship Research*, Vol. 51, No 2, 160-173.

In refereed books:

Tigkas I.G. and Spyrou K.J. (2019): Bifurcation Analysis of Ship Motions in Steep Quartering Seas, Including Hydrodynamic "Memory", *Contemporary Ideas on Ship Stability- Risk of Capsizing,* Springer Publishers, 325-345.

Tigkas I.G. and Pallikaropoulos N. (2008): Parametric Rolling Behaviour of a Containership, *Topics on Chaotic Systems*, World Scientific Publishing, 344-352.

Spyrou K.J and Tigkas I.G. (2007): Nonlinear Dynamics of Ship Steering Behaviour Under Environmental Excitations, *International Union of Theoretical and Applied Mechanics (IUTAM) Symposium on Fluid-Structure Interaction in Ocean Engineering*, IUTAM Bookseries, Vol. 8, Springer Publishers, 261-272.

Tigkas I. and Theodoulides A. (2011): On the Determination of the Effective Breadth of Plating, *Sustainable maritime transportation and exploitation of sea resources*, Vol. 281, Routledge Publishing, 281-288.

In international conferences:

Tigkas I. and Spyrou K.J. (2021): Continuation Analysis of Ship Motions in Bi-chromatic Following/Quartering Seas, *1st International Conference on the Stability and Safety of Ships and Ocean Vehicles (STABS 2021)*, Glasgow, Scotland, UK.

Tigkas I. and Spyrou J. (2012): Continuation Analysis of Surf-Riding And Periodic Responses of a Ship in Steep Quartering Seas, *11th International Conference on the Stability of Ships and Ocean Vehicles*, Athens, Greece.

AbuBakar A., Dow R., Tigkas I.G., Samuelides M.S., Spyrou K.J. (2010): Investigation of an Actual Collision Incident Between a Tanker and a Bulk Carrier, *11th International Symposium on Practical Design of Ships and Other Floating Structures (PRADS 2010)*, Rio de Janeiro, Brazil.

Spyrou K. J., Tigkas I., G. Scanferla and Gavriilidis N. (2008): Problems and capabilities in the assessment of parametric rolling, *Proceedings of the 10th International Ship Stability Workshop*, *23-25* March 2008*,* Daejeon*,* Korea*.*

Spyrou K.J. and Tigkas I.G. (2007): Principle and Application of Continuation Methods for Ship Design and Operability Analysis, *10th International Symposium on Practical Design of Ships and Other Floating Structures (PRADS 2007)*, Houston, Texas, USA.

Spyrou K., Tigkas I. and Chatzis A. (2005): Limits of Ship Controllability in Wind, *3rd International Symposium on Ship Hydrodynamics and Manoeuvring (HYDMAN 2005)*, Gdansk, Poland.

Tigkas I., Tigka D. and Tigkas T. (2005): Option Pricing and Risk Management in Shipping, *1st International Symposium on Ship Operations, Management and Economics (SNAME)*, Athens, Greece.

Technical reports:

Tigkas I, Papatheodorou T, Peppas A. & Tsakalomatis D. (2017): *Hydrodynamic Analysis CFD Calculations & Model Tests of Floatmast Tension Leg-Platform*, FLOATMAST Ltd.

Spyrou K., Themelis N. and Tigkas I. (2005): *Benchmark Study of Numerical Codes for the Prediction of Intact Stability of Ships in Extreme Seas: Phase II*, ITTC, Sub-Committee on Ship Stability in Waves.

Spyrou K., Themelis N. and Tigkas I. (2004): *Benchmark Study of Numerical Codes for the Prediction of Intact Stability of Ships in Extreme Seas: Phase I*, ITTC, Sub-Committee on Ship Stability in Waves.