Dr Vanessa (Vasiliki) Ch. Katsardi

Department of Civil Engineering • School of Engineering • University of Thessaly

Pedion Areos • GR-383 34 Volos

tel:+30 24210 7 4167 • Mobile: +306977622352

E-mail: vkatsardi@civ.uth.gr

Assistant Professor Civil Engineering Department University of Thessaly



May 2019

Curriculum Vitae

PERSONAL INFORMATION

Born in 16th November 1978 Married, Mother of two children

PERSONAL WEBPAGES

Scopus <u>www.scopus.com/authid/detail.uri?authorld=9244519500</u>

Google Scholar <u>scholar.google.gr/citations?user=-i5u5zgAAAAJ&hl=el</u>

Research Gate <u>www.researchgate.net/profile/Vanessa Katsardi</u>

LindedIn <u>www.linkedin.com/in/vasiliki-vanessa-katsardi-</u>

96b06325?trk=nav_responsive_tab_profile

Publons https://publons.com/researcher/1348706/vasiliki-vanessa-katsardi/

ORCID ID orcid.org/0000-0003-0508-8382

EDUCATION

2002-2007 Imperial College, London

Department of Civil & Environmental Engineering

Doctor of Philosophy (PhD) in Civil Engineering

Democritus University of Thrace, Xanthi, Greece

Department of Civil Engineering

2001-2002 • MSc in Hydraulic Engineering

Specialisation: Port & Harbour Engineering

1996-2001 ■ Civil Engineering

Grade: 7.82/10 (Very Good)

POSITIONS

May 2017 - Today	<u>Assistant Professor</u> , Coastal and Ocean Engineering, Department of Civil Engineering, University of Thessaly, Volos, Greece
Jul. 2014 – May 2017	<u>Lecturer</u> , Coastal Engineering, Department of Civil Engineering, University of Thessaly, Volos, Greece
Feb. 2014 – July 2014 and Feb. 2012 – July 2012	Adjunct Professor, Coastal Engineering, Department of Civil Engineering, University of Thessaly, Volos, Greece
Dec. 2010 – Oct. 2013	<u>Post-doctorate Research Associate</u> (Part-time), School of Civil Engineering, National Technical University of Athens, Greece
Oct. 2007 – Sep. 2013	Adjunct Assistant & Laboratory Professor, Department of Civil Works and Infrastructure Technology, Technological Educational Institute of Athens, Greece
Oct. 2008 – Feb. 2009	Adjunct Laboratory Professor, Department of Civil & Structural Engineering Educators, School of Pedagogical & Technological Education Athens, Greece
Oct. 2006 – Aug.2007	<u>Post-doctorate Research Assistant/Associate</u> , Department of Civil & Environmental Engineering, Imperial College, London, UK

PUBLICATIONS

THESES

- (T.1) PhD Thesis title: Surface Water Waves in Intermediate and Shallow Water Depths., Supervisor: C. Swan
- (T.2) MSc Thesis: Wave Refraction Application in the area "Mari" in Cyprus. *Grade:* 10, Supervisor: P.F. Matsoukis
- (T.3) Diploma thesis: Wave Propagation over arbitrary bottom topography Application in the area of Atherinolakkos in Crete. *Grade: 10,* Supervisor: P.F. Matsoukis

Award TCG (Details on issue TCG 2242)

INTERNATIONAL SCIENTIFIC JOURNALS

- (J.10) Koukouselis A., Chatziioannou K., **Katsardi V.**, Mistakidis E., 2019, *Development of an equivalent static method for the approximation of the dynamic response of offshore structures*, Engineering Computations, (Swansea, Wales), 36(4),. 1121-1141
- (J.9) Chatziioannou K., **Katsardi V.**, Koukouselis A., Mistakidis E., 2018, On the consideration of wave and structural nonlinearities in the design of compliant towers through dynamic analysis, Journal of Ocean Engineering and Marine Energy, 4(4), 323-342
- (J.8) Chatjigeorgiou I.K., **Katsardi V.**, 2018, *Hydrodynamics and near trapping effects in arrays of multiple elliptical cylinders in waves*, Ocean Engineering, 157, 121-139.
- (J.7) Chatziioannou K., **Katsardi V.**, Koukouselis A., Mistakidis E., 2017, *The effect of nonlinear structure interactions in the design of an offshore structure*, Journal of Marine Structures, 52, 126-152.

- (J.6) Tsoukala V.K., **Katsardi V.**, Hadjibiros K., Moutzouris C.I., 2015, *Beach Erosion and Consequential Impacts Due to the Presence of Harbours in Sandy Beaches in Greece and Cyprus*, Environmental Processes, 2(1), 55-71
- (J.5) Tsoukala V.K., **Katsardi V.**, Belibassakis K.A., 2014, *Wave transformation through flushing culverts operating at seawater level in coastal structures,* Ocean Engineering, 89, 211-229.
- (J.4) Belibassakis, K.A., Tsoukala, V.K., **Katsardi V.**, 2014, Three dimensional wave diffraction in the vicinity of openings in coastal structures, Applied Ocean Research, 45, 40-54.
- (J.3) **Katsardi V.**, de Lutio L., Swan C., 2013, An experimental study of large waves in intermediate and shallow water depths. Part I: Wave height and crest height statistics, Coastal Engineering, 73, 43-57.
- (J.2) Bateman, W.J.D., **Katsardi, V.**, Swan, C., 2011, *Realistic descriptions of extreme ocean waves; the application of recent advances in wave modelling,* Applied Ocean Research, 34, 209-224.
- (J.1) **Katsardi V.**, Swan C., 2011, *On the Description of Large Shallow Water Waves. Part I: Uni-Directional Seas*, Royal Society, Series A, 467, 778-805.

INTERNATIONAL SCIENTIFIC CONFERENCES

- (P.22) Charisi E., **Katsardi V.**, Chatjigeorgiou I.K., 2019, *Simulation of a Series of Breakwaters with a Series of Elliptical Cylinders*, 1st International Scientific Conference on Design and Management of Port Coastal and Offshore Works, Athens, Greece.
- (P.21) **Katsardi V.**, Santic I., Chatziioannou K., Koukouselis A., Mistakidis E., Tsoukala V.K., Chatjigeorgiou I.K., 2019, *Experimental investigation of the oscillating properties response of a three-legged jacket tower*, 1st International Scientific Conference on Design and Management of Port Coastal and Offshore Works, Athens, Greece.
- (P.20) **Katsardi V.**, Koukouselis A., Chatziioannou K., Mistakidis E., Santic I., Tsoukala V.K., Chatjigeorgiou I.K., 2019, *Oscillating properties of jacket support structures subjected to extreme wave events*, Accepted for presentation at 2nd International Conference on Natural Hazards & Infrastructure, ICONHIC2019, Chania, Greece.
- (P.19) Chatjigeorgiou I.K., **Katsardi V.**, Miloh T., 2018, *Hydrodynamics and ellipsoidal harmonics*, AIP Conference Proceedings, 1978, 470107.
- (P.18) Chatjigeorgiou I.K., Chatziioannou K., **Katsardi V.**, Koukouselis A., Mistakidis E., 2018, *Numerical and Experimental Investigation of the wave loading on a three-legged offshore wind turbine jacket platform,* To be presented in 37th International Conference on Offshore Mechanics and Arctic Engineering, ASME, OMAE2018, Madrid, Spain, OMAE2018-78416.
- (P.17) Chatziioannou K., **Katsardi V.**, Koukouselis A., Mistakidis E., 2017, *Nonlinear dynamic response of a compliant tower under the effect of steady and unsteady sea states*, 36th International Conference on Offshore Mechanics and Arctic Engineering, ASME, OMAE2017, Trondheim, Norway, OMAE2017-62449.
- (P.16) **Katsardi V.**, Grammenos Th., Katifeoglou S., Mavrakos S.A., Chatjigeorgiou I.K., 2016, *Hydrodynamic loading and wave run-up on "elliptical" breakwaters*, Proceedings of the Twenty-Sixth International Ocean and Polar Engineering

- Conference, Rhodes, Greece, ISOPE 2016, 1406-1412.
- Chatziioannou K., Katsardi V., Mistakidis E., 2015, The importance of accurate (P.15) calculation of the nonlinear extreme wave kinematics in the design of an offshore platform, 16th International Congress of the International Maritime Association of the Mediterranean IMAM 2015 - Towards Green Marine Technology and Transport, Pula, Croatia, 203-213.
- (P.14)Tsoukala V.K., Pyrpiri Th., Chondros M., Katsardi V., 2015, Prediction of wave transmission coefficient using neural networks and experimental measurements, 16th International Congress of the International Maritime Association of the Mediterranean IMAM 2015 - Towards Green Marine Technology and Transport, Pula, Croatia, 365-372.
- Chatziioannou K., Katsardi V., Koukouselis A., Mistakidis E., 2015, Response of (P.13) offshore structures under the effect of real sea states including structural and soil nonlinearities, 8th GRACM International Congress on Computational Mechanics, Volos, July 2015, Greece.
- Haniffah M.R.M., Taylor P.H., Swan C., Katsardi V., Borthwick A.G.L., 2014, Large (P.12) Events in Waves on the Continental Shelf, Civil Engineering Research in Ireland, CERI 2014, Queen's University Belfast.
- Katsardi V., Tsoukala V.K., Moutzouris K., 2014, Beach erosion due to the presence of harbours in sandy beaches: the case of Greece in comparison with international observations, 12th International Conference on Protection and Restoration of the Environment, PRE12, Skiathos, Greece.
- Tsoukala V.K., **Katsardi V.**, Hadjibiros K., 2014, *Environmental and socio-economic* issues concerning the interaction of harbours with their adjacent coasts, 12th International Conference on Protection and Restoration of the Environment, PRE12, Skiathos, Greece.
- Chondros M., Katsardi V., Tsoukala V.K., Belibassakis K., 2014, Experimental verification of a new 3D numerical model involving wave transformation through flushing culverts. 3rd IAHR (International Association for Hydro-Environment Engineering and Research) Europe congress, Porto, Portugal, (e-proceedings).
- Belibassakis K.A., Athanassoulis, G.A., Gerostathis Th.P., Katsardi V., 2013, Transformation of wave conditions in nearshore and coastal areas by a 3D coupledmode wave model Intern. Maritime Association Mediterranean Conference, IMAM 2013, La Coruna, Spain
- Katsardi V., Tsoukala V.K., Belibassakis K., 2013, 3D Wave transformation through openings in coastal structures. Proceedings of the 32nd International Conference on Offshore Mechanics and Arctic Engineering, ASME, OMAE2013, Nantes, France, V005T06A050.
- (P.6) Katsardi V., Tsoukala V.K., Belibassakis K., 2013, Estimation of wave transmission trough flushing culverts in breakwaters. Proceedings of the 32nd International Conference on Offshore Mechanics and Arctic Engineering, ASME, OMAE2013, Nantes, France, V005T06A048.
- Katsardi V., Boundris I., Tsoukala V.K., Belibassakis K., 2012, A numerical study of wave transmission in coastal structures through flushing culverts, Proceedings of the 22nd International Ocean and Polar Engineering Conference, ISOPE2012, Rhodes, Greece, 1356-1363.
- (P.4) Katsardi V., Swan C., 2011, An experimental study of shallow water wave statistics

- on mild bed slopes, Proceedings of the 30th International Conference on Offshore Mechanics and Arctic Engineering, OMAE2011, Rotterdam, The Netherlands.
- (P.3) Katsardi V., Swan C., 2006, The importance of directionality in evolution of large waves in intermediate and shallow water depths, Proceedings of the 30th International Conference on Coastal Engineering, ICCE2006, San Diego, California, USA.
- (P.2) Katsardi V., Swan C., 2005, The effect of reduced water depth on the description of extreme waves and the prediction of water particle kinematics, Proceedings of the 24th International Conference on Offshore Mechanics and Arctic Engineering, OMAE2005, Halkidiki, Greece.
 - Note: Reviewer recommended the paper acceptable with honors.
- (P.1) **Katsardi V.,** Swan C., 2004, *The evolution of large waves in shallow water*, Proceedings of the 29th International Conference on Coastal Engineering, ICCE2004, Lisbon, Portugal.

NATIONAL SCIENTIFIC CONFERENCES

- (G.7) Αναστασίου, Ε., Στάνκοβιτς, Νt., Χατζηιωάννου, Κ., Κουκουσέλης, Α., **Κατσαρδή, Β.**, Μυστακίδης, Ε., 2017, Δυναμική απόκριση θαλάσσιας κατασκευής στα βαθιά νερά λαμβάνοντας υπόψη μη γραμμικές αλληλεπιδράσεις κυματισμών-εδάφους-κατασκευής, 9° Εθνικό Συνέδριο Μεταλλικών Κατασκευών, Λάρισα.
 - Anastasiou, E., Stankovic, D., Chatziioannou, K., Koukouselis, A., **Katsardi V.**, Mistakidis, E., 2017, *Dynamic response of a deep-water offshore platform considering wave-soil-structure nonlinear interactions*, 9th Hellenic National Conference of Steel Structures, Larisa (In Greek).
- (G.6) Πυρπιρή, Θ., Χονδρός, Κατσαρδή, Β., Τσουκαλά, Β.Κ., 2015, Υπολογισμός του συντελεστή κυματικής μετάδοσης μέσω αγωγού ανανέωσης με χρήση νευρωνικών δικτύων και πειραματικών μετρήσεων. 3ο ΚΟΙΝΟ ΣΥΝΕΔΡΙΟ: 13ο ΕΛΛΗΝΙΚΗΣ ΥΔΡΟΤΕΧΝΙΚΗΣ ΕΝΩΣΗΣ (ΕΥΕ), 9ο ΕΛΛΗΝΙΚΗΣ ΕΠΙΤΡΟΠΗΣ ΔΙΑΧΕΙΡΙΣΗΣ ΥΔΑΤΙΚΩΝ ΠΟΡΩΝ (ΕΕΔΥΠ), 1ο ΕΛΛΗΝΙΚΟΥ ΥΔΑΤΙΚΟΥ ΣΥΝΔΕΣΜΟΥ, «ΟΛΟΚΛΗΡΩΜΕΝΗ ΔΙΑΧΕΙΡΙΣΗ ΥΔΑΤΙΚΩΝ ΠΟΡΩΝ ΣΤΗ ΝΕΑ ΕΠΟΧΗ», Αθήνα.
 - Pyrpiri Th., Chondros M., **Katsardi V.**, Tsoukala V.K., 2015, *Prediction of wave transmission coefficient using neural networks and experimental measurements.* 3rd common conference: 13th Hellenic Hydrotechnical Association, 9th Greek Committee for Water Resources Management, 1st Hellenic Water Association, Athens (In Greek).
- (G.5) Τσουκαλά, Β.Κ., Στάμου Α.Ι., **Κατσαρδή, Β.**, Γιαντσή, Θ., Μπελιμπασάκης, Κ.Α., Μουτζούρης, Κ.Ι., 2015. Πειραματική και υπολογιστική προσομοίωση αγωγών ανανέωσης υδάτων για ο περιβαλλοντικό σχεδιασμό μαρίνας, Πρακτικά Πρώτου Πανελλήνιου Συνεδρίου Τουριστικοί Λιμένες, Μαρίνες,, Αθήνα, 283-292.
 - Tsoukala, V., Stamou, A.I., **Katsardi, V.**, Giantsi, Th., Belibassakis, K.A., Moutzouris, K. I., 2015, *Experimental and numerical simulations of flushing culverts for the environmental design of marinas*, 1st Hellenic Conference of Touristic Harbours, Marinas, Athens, 283-292 (In Greek).
- (G.4) Κατσαρδή, Β., Τσουκαλά, Β.Κ. και Κ.Ι. Μουτζούρης, 2014. Διάβρωση σε αμμώδης ακτές λόγω της παρουσίας λιμένων: Ο Μηχανισμός που συνδέεται με την κυματική περίθλαση, Πρακτικά Έκτου Πανελλήνιου Συνεδρίου για την Διαχείριση και Βελτίωση Παράκτιων Ζωνών, Αθήνα, 235-248.
 - Katsardi, V., Tsoukala, V., Moutzouris, K., 2014, Beach erosion due to the presence

of harbours in sandy beaches: The diffraction-associated mechanism, 6th Hellenic Conference of Management and Improvement of Coastal Zones, November 2014, Athens, 235-248 (In Greek).

(G.3) Κατσαρδή, Β., Τσουκαλά Β.Κ., Μουτζούρης, Κ.Ι. 2011. Εντατικοποίηση κυματικής δράσης στα αμέσως κατάντη μόλων και κυματοθραυστών, Πρακτικά Πέμπτου Πανελλήνιου Συνεδρίου για την Διαχείριση και Βελτίωση Παράκτιων Ζωνών, Αθήνα, 245-260.

Katsardi, V., Tsoukala, V.K., Moutzouris, K.I., 2011, *Wave action amplification, downstream of harbours, due to the presence of breakwaters,* 5th Hellenic Conference of Management and Improvement of Coastal Zones, November 2011, Athens, 245-260 (In Greek).

(G.2) Κατσαρδή, Β., Swan, C., 2010, Μη γραμμικοί υπολογισμοί της κινηματικής των σωματιδίων ακραίων κυματισμών, με σκοπό τον υπολογισμό των φορτίσεων σε μια πλατφόρμα πετρελαίου στα ρηχά νερά, 5ο Πανελλήνιο Συνέδριο Λιμενικών Έργων 2010, Αθήνα.

Katsardi, V., Swan, C., 2010, Nonlinear Calculations of Extreme Wave Kinematics Appropriate to Load Calculations on a Jack-up in Shallow Water, 5th Hellenic Conference of Harbor Works, November 2010, Athens (In Greek).

(G.1) Ματσούκης, Π.Φ., Τουφεξή, Χ., **Κατσαρδή, Β.**, 2002, *Μετάδοση Κυματισμών πάνω* από απότομες αλλαγές βυθομετρίας πυθμένα, 3° Πανελλήνιο Συνέδριο Λιμενικών Έργων 2002, Αθήνα.

Matsoukis P.F., Toufexi, Ch., **Katsardi, V.**, 2002, Wave propagation over abrupt changes of bottom topography, 3rd Hellenic Conference of Port Structures 2002, Athens (In Greek)

REVIEW RECORD

Journals:

- Applied Ocean Research (1)
- Complexity (1)
- Environmental Processes (2)
- Fluids (2)
- Journal of Ocean Engineering and Marine Energy (3)
- Journal of Oceanography and Marine Science (1)
- Journal of Offshore Mechanics and Arctic Engineering (1)
- Journal of Sound and Vibration (1)
- Mediterranean Marine Science (1)
- Ocean Dynamics (2)
- Ocean Engineering (7)
- Physics of Fluids (8)
- Quarterly Journal of Mechanics and Applied Mathematics (1)
- Royal Society Proceedings Series A (1)
- Υδροτεχνικά (in Greek) (1)

Conferences:

- 38th International Conference on Ocean, Offshore and Arctic Engineering, OMAE2019
- 37th International Conference on Ocean, Offshore and Arctic Engineering, OMAE2018
- 36th International Conference on Ocean, Offshore and Arctic Engineering, OMAE2017
- 32nd International Conference on Ocean, Offshore and Arctic Engineering, OMAE2013
- 30th International Conference on Ocean, Offshore and Arctic Engineering, OMAF2011

- International Society of Offshore and Polar Engineers, ISOPE2018
- International Society of Offshore and Polar Engineers, ISOPE2017
- 3rd EWaS International Conference
- 14th Hellenic Hydrotechnical Association, 2019
- 1st International Scientific Conference on Design and Management of Port Coastal and Offshore Works, DMPCO2019

Research Proposals:

1η Προκήρυξη Ερευνητικών Έργων Ελληνικό Ίδρυμα Έρευνας & Καινοτομίας - ΕΛΙΔΕΚ για την Ενίσχυση Μεταδιδακτόρων Ερευνητών/Τριών (1st call for Research Projects from the Hellenic Foundation for Research and Innovation - HFRI for Postdoctoral researchers)

PRESENTATIONS

(Pr.1) Τσουκαλά, Β.Κ., **Κατσαρδή, Β.**, Χατζηγεωργίου, Ι.Κ., 2017, Βάσεις τύπου Jacket στήριξης υπεράκτιων ανεμογεννητριών μεγάλης ισχύος για εφαρμογές σε μεγάλα βάθη νερού, 2° Συνέδριο «Περιβάλλον και Ενέργεια» ΕΔΕΜ -ΤΕΕ, Αθήνα.

Tsoukala V.K., **Katsardi V.**, Chatjigeorgiou I.K., 2017, Jacket-type structures as foundations of high power offshore wind turbines for applications in deep water, 2nd conference "Environment and Energy" EDEM- TCG, Athens.

INVITED TALKS

- (Τ.6) «Νέες τεχνολογίες στο θαλάσσιο περιβάλλον για την αντιμετώπιση της κλιματικής αλλαγής» 1° Πανελλήνιο Συνέδριο «Κλιματική Αλλαγή», Περιφερειακή Ένωση Δήμων Θεσσαλίας, Οκτ. 2017.
 - «New technologies in the marine environment to prevent climate change» 1st Hellenic conference for the climate change, Regional association of municipalities of Thessaly, Oct. 2017.
- (T.5) "Numerical Modelling: The BST model" in the School of Naval Architecture and Mechanical Engineering, NTUA. Feb. 2010
- (T.4) "Surface Water Waves in Intermediate and Shallow Water Depths" in the School of Naval Architecture and Mechanical Engineering, NTUA. Apr. 2008
- (T.3) "Non-linear Surface Waves in Shallow and Intermediate Water" στην Society of Underwater Technology, Group on Environmental Forces (SUTGEF). May 2007
- (T.2) "The importance of directionality in evolution of large waves in intermediate and shallow water depths" Imperial College, London for Ove Gudmestad (Statoil). Nov. 2006
- (T.1) "The effect of reduced water depth on the description of extreme waves and the prediction of water particle kinematics" Imperial College, London for Ove Gudmestad (Statoil). Nov. 2005

CONTRIBUTION TO CONFERENCE AND WORKSHOP ORGANISATION

May 2019 Co-ordination and Moderation of the special session "Sustainable Ports and Marinas"

Moderation of the special session "Offshore Sustainable Energy and Connection

with Ports"

Co-chair at the session "Energy Extraction from the Oceanic Environment"

at the 1st International Scientific Conference on Design and Management of Port Coastal and Offshore Works, DMPCO2019, Athens, Greece

June 2017 Chair and Co-chair at two Symposia on "Extreme Loading and Responses" at the 36th International Conference on Offshore Mechanics and Arctic Engineering, OMAE2017

Oct. 2017 Co-Organisation Conference on the Yachting Sector of the Mediterranean, within the frame the Interreg Program InnoBlueGrowth, Marseille, France

Mar. 2011 Technological Educational Institute of Athens, Department of Civil Works and Infrastructure Technology: Organisation of a day seminar related to harbour works.

PROFESSIONAL OVERVIEW

Sep. 2001 - Today

Civil Engineer

Synopsis

Assistant Professor of Coastal and Ocean Engineering

Wave-mechanics, wave propagation, wave-structure interactions, offshore and near-shore works. Numerical, Experimental and Theoretical contributions.

Worked with/for:

University of Thessaly, Volos, Greece

Imperial College, London, UK

National Technical University of Athens, Greece

Democritus University of Thrace, Xanthi, Greece

ConocoPhillips, Houston, USA

Marin, (Maritime Research Institute Netherlands)

Noble Denton Ltd., London, UK

SHELL International Exploration and Production (SIEP), The

Netherlands

Statoil, Norway

Woodside Energy Plc., Perth, Australia

AΔK Consulting Engineers SA, Athens, Greece

Clearchos G. Routsis, Engineering Company, Athens, Greece

Details below

TEACHING EXPERIENCE

Oct 2018 - Feb 2019 National Technical University of Athens, School of Civil Engineering

Visitor Professor

Postgraduate module in the MSc Program "Science and Technology of Water

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Port and Coastal Structures (Co-teaching with Profs. V.K Tsoukala and K.

Memos Contribution: 5 out of 13 lectures)

University of Thessaly, Department of Civil Engineering

May 2017 - Today March 2016 - May 2017 Assistant Professor

Lecturer

Undergraduate modules:

- Maritime Hydraulics and Port Works 1.
- 2. **Wave Mechanics and Offshore Structures**
- Coastal Engineering and Coastal Works

Postgraduate module in the MSc Program "Analysis and design of energy infrastructure construction":

Wave-structure interactions - Offshore structures (co-teaching with Prof. A. Liakopoulos and Assoc. Prof. Th. Grammenos - Contribution: 11 out of 13 lectures)

July 2014 - Sep 2015

Undergraduate modules:

- 1. Coastal Engineering and Port Works
- 2. Wave Mechanics and Coastal Oceanography

July 2014 – Today

Supervision of 14 final-year undergraduate projects (9 finished) and 5 postgraduate project (1 finished, Details below).

Feb. 2014 – July 2014

Adjunct Professor

Undergraduate module: and

Feb. 2012 – July 2012

Coastal Engineering and Port Works

Feb. 2012 – July 2012

Oct. 2011 - Feb. 2012

Visitor Professor

Postgraduate module in the MSc Program "Simulation and design of civil

engineering constructions":

Simulation and management of coastal water systems

Nov. 2011 – Jan. 2012 Democritus University of Thrace, Department of Civil Engineering

Visitor Professor

Postgraduate module in the MSc Program "Hydraulic Engineering": Simulation of coastal processes (Co-teaching with Prof. P.F. Matsoukis -

Contribution: 6 out of 13 lectures)

Feb. 2012 – Oct. 2013 National Technical University of Athens, School of Civil Engineering

Research associate

Co-supervision of 2 postgraduate theses and 1 undergraduate thesis with

Assoc. Prof. V. Tsoukala.

Teaching assistant

MSc course "Water Resources Science & Technology",

Module: Marine Hydrodynamics Feb. 2011 - Jul. 2011

> Teaching Assistant Undergraduate module: **Coastal Engineering**

Oct. 2007-Sep. 2013 Technological Educational Institute of Athens,

Department of Civil Works and Infrastructure Technology

Adjunct Assistant Professor,

Modules:

- 1. **Coastal Engineering**
- **Dams and Rivers Arrangements**

- Port Engineering 3.
- 4. Hydrology
- 5. **Hydraulics Laboratory**
- Supervision of 8 final-year projects (Details below).
- Participation in the equipment design of a small coastal engineering tank in the Hydraulics Laboratory.

Oct. 2008-Feb. 2009

School of Pedagogical & Technological Education Athens Department of Civil & Structural Engineering Educators

Adjunct Laboratory Professor Module: Hydraulics Laboratory

Oct. 2006-Aug.2007

Imperial College, London, Department of Civil & Environmental Engineering

Research Associate

Assist in the supervision of a PhD student (with Prof. Chris Swan) Research program "Safe Off-loading".

Sep. 2003-Apr. 2006

PhD candidate, Graduate teaching assistant

Modules:

- 1. Coastal Engineering
- 2. Wave Mechanics
- 3. Applied Hydraulics
- 4. Open Channel Hydraulics Lab
- 5. Supervision of the Fluid Mechanics Design Project
- 6. Structural Mechanics
- 7. Computer Application in Engineering, Fortran 95
- Computer Application in Engineering, Fortran 95 and computer packages

Distinction as the most effective graduate teaching assistant for the academic year 2003-2004 by a student's poll.

Sep. 2004- Apr. 2006

Member of the prospective undergraduate students committee for the academic years 2005-2006 and 2006-2007.

SUPERVISION OF PhDs

On-going:

University of Thessaly, Department of Civil **Engineering**

1. Adriana Kordatou "Design of marine structures taking into account the interaction with the wave field"

Second member of the supervision committee. 1st supervisor Prof. E. Mistakidis

National Technical University of Athens, School of Civil **Engineering**

2. Eirini Anastasiou

"Hydrodynamic Interactions of Semi-Immersed Orthotropic Shapes Using Linear and Non-Linear Wave Theories" Υποτροφία ΙΚΥ 2018-2021

Second member of the supervision committee. 1st supervisor Prof. IK Chatjigeorgiou

SUPERVISION OF FINAL YEAR POSTGRADUATE PROJECTS

University of Thessaly, Department of Civil **Engineering**

Dimitra Mpalamoti, 2019, "Near wave-trapping effects in arrays of cylinders in a channel". MSc Thesis, MSc Course: Analysis and design of energy infrastructure construction.

National Technical

2. Ioannis Boundris, 2012, "Numerical Methods of simulating wave

University of Athens, School of Civil **Engineering**

- transformations due to the presence of flushing culverts on breakwaters" MSc Thesis, MSc Course: Water Resources Science and Technology, Co-supervision with Assoc. Prof. V. Tsoukala.
- E. Argiropoulos, 2012. "Study of the amplification of the wave characteristics downwave of breakwaters and within its shadow" MSc Thesis, MSc Course: Water Resources Science and Technology, Cosupervision with Assoc. Prof. V. Tsoukala.

University of Thessaly, **Department of Civil Engineering**

On-going:

- Lefteris Koutsouros "Comparisons of experimental vertical impact forces with standard design procedures in offshore structures"
- Dimitris Gomas "Energy autonomy of Marinas"
- 6. Georgia Tzikou "Wave Energy and applications to the Aegean Sea"
- Georgios Maragkos "CFD analysis of flushing culverts in ports"

SUPERVISION OF FINAL YEAR UNDERGRADUATE PROJECTS

University of Thessaly, **Department of Civil Engineering**

On-going:

- 8. Athina Alexandri "The problem of beach erosion in the area of Platamonas"
- Adamantios Grantzas and Nikos Triantafyllou "Investigation of the most effective configuration of a series of wave energy converters of elliptical cross-section"
- 10. Anna Siontorou "Nonlinear Propagation or random waves the generation of unexpected walls of water in intermediate water depths, Comparisons with 2nd order analytical models"
- 11. Lefteris Stamatopoulos "Investigation of the most effective configuration of a series of wave energy converters situated on the face of a breakwater"
- 12. Fragiskos Vakondinos "The new layout of the port and marinas of Syros".

Finished:

- 13. Konstantinos Vavakas "Investigation of sediment transport at the ancient port of Methoni".
- 14. Orfeas Papaioannou and Doukas Misios "Nonlinear Propagation or random waves - the generation of unexpected walls of water in intermediate water depths".
- 15. Efi Charisi "Investigation of the most effective configuration of a series of detached breakwaters using a semi-analytical solution" Cosupervision with Prof. A. Liakopoulos.
- 16. Niki Kanaki "Wave-load calculations of a gravity platform positioned in intermediate water depth".
- 17. Aristeidis Logothetis "The change of wave characteristics and beach erosion due to the presence of ports and marinas in sandy beaches".
- 18. Eirini Anastasiou and Ntaniela Stankovic, 2016, "Dynamic analysis of an offshore structure subject to real sea-states" Co-supervision with Prof. E. Mistakidis.
- 19. Stavroula Kofou, 2016, "3D Wave transformation through openings in breakwaters" Co-supervision with Assist. Prof. Th. Grammenos.
- 20. Christos Karipidis, 2015, "Wave loads on elevated decks of offshore platforms".
- 21. Kostis Chatziioannou, 2015, "The effect of nonlinear wave-structure and soil-structure interactions in the design of an offshore structure" Co-supervision with Prof. E. Mistakidis.

National Technical
University of Athens,
School of Civil
Engineering

22. Spyros Rizos, 2012, "Simulation of wave transmission in harbours through flushing culverts using a couple-mode model" Co-supervision with Assoc. Prof. V. Tsoukala.

Technological Educational Institute of Athens, **Department of Civil** Works and Infrastructure Technology

- 23. Nikos Paraskevopoulos, 2012, "The effects of the construction of harbours in sandy beaches: The case of Katerini's fishing port"
- 24. Eleftheria Chatjistamouli, 2012, "A literature review on the applications of Very Large Floating Structures". Co-supervision with Assoc. Prof. F. Kokkinos. Project HydELFS, Archimedes III

The theses below investigate some of Greece's ancient ports which are part of the research program "Limenoscope" started by the Department of Underwater Antiquities (Ministry of Culture) and the School of Civil Engineering (NTUA).

- 25. Mpatsou Chrisafoula and Farou Vasiliki, 2011, "Technical and Historical review of the ports in Pylos, Koroni and Methoni"
- 26. Aggeliki Kapsi, 2009, "Review of modern and ancient ports of Aigina island"
- 27. Athina Mari and Andreas Manis, 2009, "The port of Heraklion"
- 28. Alexandra Milonaki, 2009, "The Venetian Port of the Old Town of Chania"
- 29. Maria Vamvouli, 2009, "Mytilene: Two ancient ports and one modern"
- 30. Chara Tombea, 2008, "The port of Syros, from the ancient times until today"

MEMBER OF PhD EXAMINATION COMMITTEES

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

1. Christos Papoutselis, November 2016, Nonlinear water waves over varying bathymetry: Theoretical and numerical study using variational methods

LECTURE NOTES

- 2016 «Wave Mechanics and Offshore Structures», Department of Civil Engineering, University of Thessaly
- 2016 «Maritime Hydraulics and Port Works», Department of Civil Engineering, University of Thessaly
- «Coastal Engineering and Port Works», Department of Civil Engineering, 2012 University of Thessaly
- 2010 «Coastal Engineering», Department of Civil Works and Infrastructure Technology, **Technological Educational Institute of Athens**
- 2010 «Dams and Rivers Arrangements», Department of Civil Works and Infrastructure Technology, Technological Educational Institute of Athens
- 2009 «Port Engineering», Department of Civil Works and Infrastructure Technology,

Technological Educational Institute of Athens

«Hydrology», Department of Civil Works and Infrastructure Technology, Technological Educational Institute of Athens 2009

RESEARCH PROJECTS

2016-2019 (36 months)	Interegg MED, InnoBlueGrowth: Horizontal Communication and Capitalization project for innovation in blue growth at Mediterranean level. Member of the research team of NTUA		
2018	VIHYDRO II, Hydroelastic Response of Jacket Foundations of Offshore Wind		
(RP.15)	Turbines subjected to Hydrodynamic Impulsive Loading, MaRINET2, CNR-INM Rome, Italy Group Leader (Coordinator). Group involves the Civil Engineering Department UTH, School of Nava Architecture and Mechanical Engineering, NTUA, the School of Civil Engineering, NTUA and the CNR INM, Rome.		
(2 months)			
2012 (RP.14)	C. Swan & V. Katsardi , Model Tests for assessing the wave run-up and the associated fluid loads on structural members located at various heights on the platform Sleipner A GBS. (Report 1 pp. 70)		
(3 months)	Employers: Imperial College, London and Statoil, Norway		
2012	Archimedes III, HydELFS: Hydroelastic response of large floating structures and arbitrarily shaped bodies in an environment of varying 3D bathymetry Member of the research team, Coordinators: Assistant Professor F. Kokkinos and Associate Professo		
(RP.13)			
(33 months)	K. Belibassakis		
2011	Basic Research Project 2010: Wave transmission in harbours through flushing culverts, a numerical and experimental study Post-doctoral Part-time		
(RP.12)	Research Associate, funded by NTUA. (Report 3 pp. 87)		
(30 months)	Supervisor: Dr. V. Tsoukala, Assoc. Professor, External Participant: Dr. K. Belibassakis, Associate Professor in School of Naval Architecture and Marine Engineering		
2011	Protection and Improvement Study in the coastal area of Ormideia, Cyprus, Phase		
(RP.11)	II: Alternative solutions. (Report 4 pp. 91) Member of the Research team, Head of the project: Prof. K. Moutzouris, NTUA		
(3 months)			
2011	Wave action amplification, downstream of harbours, due to the presence of breakwaters (There is no final report but Publications J1, G3 and G4)		
(RP.10) (3 months)	Supervisor: Prof. K. Moutzouris, NTUA		
2010	C. Swan, S. Archibald, V. Katsardi, M. Latheef, J. Roos & F. Stevanato CREST: Cooperative Research in Extreme Seas and their Impact, (Report 6 pp. 139)		
(RP.9)	Employers: Imperial College, London and Marin (Maritime Research Institute Netherlands)		
(1 month)			
2009	C. Swan & V. Katsardi, Predictions of the Nonlinear Water Particle Kinematics		
(RP.8)	Beneath Extreme Waves in a Variety of Water Depths, An International Guide (Report 7 pp. 98)		
(9 months)	Employers: Imperial College, London and SHELL UK Ltd., Aberdeen, Scotland.		
2008	C. Swan & V. Katsardi, Wave Induced Loads on sea bed pipelines – Extension (Report 8 pp. 15) Employers: Imperial College, London and Woodside Energy Plc, Perth Australia.		
(RP.7)			
(3 months)	<u>-</u>		

- 2007 C. Swan & V. Katsardi, Wave Induced Loads on sea bed pipelines (Report 9 pp. 58)
- (RP.6) (RP.6) Employers: Imperial College, London and Woodside Energy Plc, Perth Australia.

(5 months)

- 2007 C. Swan & V. Katsardi, Calculation of the Nonlinear Water Particle Kinematics at the Ekofisk field (Report 10 pp. 40)
- (RP.5) Employers: Imperial College, London; BP Ltd., London and ConocoPhillips, Houston, USA.

(3 months)

- 2007 C. Swan & V. Katsardi, Nonlinear Calculations of Extreme Wave Kinematics
- (RP.4) Appropriate to Load Calculations on a Jack-up in Shallow Water (Report 11 pp. 35)
- (3 months) Employers: Imperial College, London και Noble Denton Ltd., London.
 - 2007 FP6 EU project: SafeOffload, Safe Offloading from Floating LNG Platforms, C.
 - (RP.3) Swan, M. Peric, V. Katsardi
 - Post-Doctoral, Employer: Imperial College, London. Funded by: E.U.

(1 year)

- 2006 JIP project: LoWiSh- Limits on Waves in Shallow Water Experimental
- (RP.2) Investigation, C. Swan & V. Katsardi (Report 13 pp. 84)
 - Employers: Imperial College, London and International Association of Oil and Gas Producers (OGP) with
- (2 years) a supervision of Shell International E&P Ltd., Hague, The Netherlands.
 - 2001 «The Mari» Port in Cyprus: Computational calculation of the wave conditions in
 - (RP.1) the harbour interior, P.F. Matsoukis, V. Katsardi, Ch. Nomikou & M. Xydas
- (Report 14 pp. 50)

(2 months) Employers: DUTH & NTUA

LABORATORY EXPERIENCE THROUGH RESEARCH PROJECTS

- 2018 VIHYDRO II, Hydroelastic Response of Jacket Foundations of Offshore Wind Turbines subjected to Hydrodynamic Impulsive Loading, MaRINET2 CNR-INM, Towing & Wave Tank Rome, Italy
- 2013 Katsardi V, Tsoukala VK, Belibassakis K, Wave transmission in harbours through flushing culverts, a numerical and experimental study, Wave Basin, Laboratory of Harbour Works, NTUA, Athens
- 2012 Swan C, Katsardi V, Model Tests for assessing the wave run-up and the associated fluid loads on structural members located at various heights on the platform Sleipner A GBS, Wave Basin, Hydraulics Laboratory, Imperial College, London
- 2007 Swan C, Katsardi V, Peric M, Safe Offloading from Floating LNG Platforms, Double-Ended Flume and Wave Basin, Hydraulics Laboratory, Imperial College, London
- 2006 Swan C, Katsardi V, LoWiSh-Limits on Waves in Shallow Water Experimental Investigation, Very-Very Long Flume, Hydraulics Laboratory, Imperial College, London

TECHNICAL PROJECTS

2009 Participation in the study of harbour works for the modification of the design of the harbour in Katakolo.

Employer: A Δ K Consulting Engineers SA, Athens

2008 Participation in the structure design of the K2 building referring to the "Extension of the University Hospital of Ioannina"
Employer: ΑΔΚ Consulting Engineers SA, Athens

Participation in the study of harbour works for the extension of the A' pier in Piraeus Σ EM Π O O Λ Π .

Employer: Klearchos G. Routsis SA, Athens

ADMINISTRATIVE ACTIVITIES

2008

Feb. 2019 - Today University of Thessaly, School of Technology: Member of the temporary general assembly of the School.

• Establishment of the new School, Connection with the other departments in the same school, Connection with the University.

Feb. 2019 - Today University of Thessaly, School of Technology, Department of Energy Systems: Member of the temporary general assembly of the department.

 Establishment of the new department, New Curriculum and Syllabus, New Appointments

Jan. 2019 - Today University of Thessaly, School of Engineering, Civil Engineering Department:

Responsible of behalf of the Hydraulics and Environmental Engineering

Division for Students Internship program.

2016-Today University of Thessaly, School of Engineering: Alternate member of the committee "Prosvasi: The accessibility centre for students with disabilities".

Oct. 2015 - Today University of Thessaly, School of Engineering, Civil Engineering Department:

Organisation and participation of the welcoming ceremony of the first-year undergraduate students.

Jan. 2015-Today University of Thessaly, School of Engineering, Civil Engineering Department:

Organisation and participation in the "Open Door" program for high-school students on behalf of the Civil Engineering Department.

Oct. 2014-Today

University of Thessaly, School of Engineering, Civil Engineering Department:

Organisation of the annual series of scientific lectures and seminars for the final year students and the postgraduate students of the Civil Engineering Department. The invited lecturers come from the University of Thessaly or other institutions, or from relevant private and public bodies that are related to the interests of Civil Engineering.

ELECTIVE ACTIVITIES

Feb.2019 - Today

Oct. 2015 - Feb. 2017

Feb.2019 - Today • Elected member of the HELLENIC FEDERATION OF UNIVERSITY TEACHERS' ASSOCIATIONS ($\Pi O \Sigma \Delta E \Pi$) representing the University of Thessaly.

• Elected member of the Management Committee (ΔE) of $\Pi O \Sigma \Delta E \Pi$.

Elected member (General Secretary) of the administrative council of the United Faculty Association of the University of Thessaly.

Elected member (Cashier) of the administrative council of the United Faculty Association of the University of Thessaly.

IT SKILLS

Office, LaTex,

2D and 3D AutoCaD

Programming Languages: Fortran, C++, Matlab

Platform: Mike 21, DHI, Models: PMS, HD, ST and BW.

FOREIGN LANGUAGES

English (Certificate of Proficiency in English, University of Cambridge),

French (Diplome d' Etudes en Langue Française, DELF).

INTERESTS & OTHER ACTIVITIES

- Elected member of the Rector's Council of the Democritus University of Thrace as a representative of the postgraduate students, 2001-2002.
- Elected member of the administrative council of the Department of Civil Engineering of the Democritus University of Thrace as a representative of the undergraduate students, 1998-1999.
- Editing and supervision of a medical academic book. "Paediatric Pulmonary Function Testing: Indications and Interpretation, Editors: Charis V. Katsardis, Anastassios C. Koumbourlis, Michael B. Anthracopoulos, and Emmanuel N.Paraskakis, 2016, Nova Publishers, USA" June 2014 Feb 2016.
- Member of the Greek and Cypriot Society of the Imperial College, London, 2002-2007.
- Swimming, Tennis, Theatre, Music.