

# **Eleni Strantzali**

Dr. Mechanical Engineer NTUA

Assistant Professor Department of Naval Architecture

University of West Attica

## **CURRICULUM VITAE**

December 2023

## Contents

1. Personal Data .....	3
2. Academic Degrees.....	3
3. Academic Positions - Academic Teaching.....	3
3.1. Academic Positions .....	3
3.2. Teaching Postgraduate Courses.....	4
3.3. Teaching Undergraduate Courses.....	4
4. Research Experience .....	5
4.1. Research programmes .....	5
4.2. Projects .....	8
5. List of publications .....	8
5.1. Publications in international journals .....	8
5.2. Publications in international conferences (review based on full paper) .....	9
5.3. Publications in international conferences (review based on abstract) .....	10
5.4. Publications in national conferences (review based on full paper).....	11
5.5. Book chapters .....	11
6. Member of Scientific Committees .....	12
6.1. Editing of scientific journal issues .....	12
6.2. Associate member of UNESCO Chair .....	12
6.3. Reviewer in scientific journals .....	12
6.4. Participation in conference committees.....	12
6.5. Participation in the organisation of annual competition.....	12

## **1. Personal Data**

**Name/Surname** Eleni Strantzali  
**Address** Department of Naval Architecture, School of Engineering,  
University of West Attica  
**email** [estra@uniwa.gr](mailto:estra@uniwa.gr)

## **2. Academic Degrees**

<b>2009</b>	<b>Diploma in Mechanical Engineering, School of Mechanical Engineering, National Technical University of Athens</b> <b>Member of the Greek Technical Chamber, with registration number 124531 and licence number Π-2/12</b>
<b>2012</b>	<b>Master of Science “Techno-Economic systems”</b> <b>School of Electrical and Computer Engineering, National Technical University of Athens</b>
<b>2018</b>	<b>Doctor of Engineering,</b> Section of Industrial Management and Operational Research, <b>School of Mechanical Engineering, National Technical University of Athens</b>
<b>2019</b>	<b>Integrated Master, School of Mechanical Engineering, National Technical University of Athens</b>

## **3. Academic Positions - Academic Teaching**

### **3.1. Academic Positions**

<b>2023 - Today</b>	Department of Naval Architecture, School of Engineering, University of West Attica, Assistant Professor
<b>2021 - 2023</b>	Department of Naval Architecture, School of Engineering, University of West Attica, ESPA "Acquisition of Academic Teaching Experience for Young Scientists with a PhD at the University of West Attica"
<b>2022 - 2023</b>	Department of Civil Engineering, School of Engineering, University of West Attica, Academic Fellow
<b>2018 - 2021</b>	Department of Naval Architecture, School of Engineering, University of West Attica, Academic Fellow
<b>2012 - 2018</b>	Department of Naval Architecture Technological Educational Institution (TEI) of Athens, Laboratory Instructor

**2010 - 2017** Department of Electronics, Technological Educational Institution (TEI) of Athens, Laboratory Instructor

### **3.2. Teaching Postgraduate Courses**

**2023 - Today** *Maritime business administration*  
Postgraduate Studies Program “Advanced Technologies in Naval Architecture and Marine Engineering”, Department of Naval Architecture, School of Engineering, University of West Attica.

### **3.3. Teaching Undergraduate Courses**

**2020 - Today** *Maritime transport economics*  
Department of Naval Architecture, School of Engineering, UniWA

**2020 - Today** *Supply chain in maritime transport*  
Department of Naval Architecture, School of Engineering, UniWA

**2022 - Today** *Business administration and management and entrepreneurship*  
Department of Naval Architecture, School of Engineering, UniWA

**2023 - Today** *Port management and operations*  
Department of Naval Architecture, School of Engineering, UniWA

**2022 - 2023** *Project Technoeconomic Analysis and Operational Research (Laboratory)*  
Department of Civil Engineering, School of Engineering, UniWA

**2018 - 2021** *Mechanical Engineering Drawing & Introduction to CAD (Laboratory)*  
Department of Naval Architecture, School of Engineering, UniWA

**2018 - 2021** *Manufacturing Processes (Laboratory)*  
Department of Naval Architecture, School of Engineering, UniWA

**2020 - 2021** *Introduction to Automatic Control (Laboratory)*  
Department of Naval Architecture, School of Engineering, UniWA

**2019 - 2021** *Ship Electric Systems – Maritime Communications and Navigation Equipment (Laboratory)*  
Department of Naval Architecture, School of Engineering, UniWA

**2018 - 2020** *Electric Installations and Automation - Introduction to Automatic Control (Laboratory)*  
Department of Naval Architecture, School of Engineering, UniWA

**2018 - 2019** *Quality Management in Shipbuilding and Shipping*  
Department of Naval Architecture, School of Engineering, UniWA

**2012 - 2018** *Mechanical Engineering Drawing & Introduction to CAD (Laboratory)*  
Department of Naval Architecture, TEI of Athens

**2012 - 2018** *Manufacturing Processes (Laboratory)*  
Department of Naval Architecture, TEI of Athens

**2013 - 2017** *Power Electronics (Laboratory)*  
Department of Electronics, TEI of Athens

**2012 - 2016** *Business administration and management and entrepreneurship (Laboratory)*  
Department of Naval Architecture, TEI of Athens

**2014 - 2016** *Electrical Circuits and Measurements (Laboratory)*  
Department of Electronics, TEI of Athens

**2013 - 2014** *Analogue Electronics (Laboratory)*

<b>2010 - 2012</b>	Department of Electronics, TEI of Athens <i>Electronic Design and Manufacturing</i> <i>Analogue Electronics II</i> <i>Electronics I</i> <i>Electronics III</i>
<b>2013 - 2018</b>	Department of Electronics, TEI of Athens <i>Technological Economics (assistant teaching)</i> School of Mechanical Engineering, NTUA School of Naval Mechanical Engineering, NTUA

## **4. Research Experience**

### **4.1. Research programmes**

- 1. 01/05/2021 – 15/11/2023: «LIFE PROFILE: PROMOTE FINANCIAL INSTRUMENTS FOR LIABILITY ON ENVIRONMENT»** Contractual parties: National Technical University of Athens, Ministry of Environment and Energy, Green Fund, National and Kapodistrian University of Athens, Panteion University, Hellenic Association of Insurance Companies, National Observatory of Athens, GRIFFIN Consulting LP.

Postdoctoral Researcher with participation in the following tasks:

1. *“Update of the current state of international and EU level regarding environmental risk analysis of Annex III activities of ELD”*
2. *“Environmental damage risk assessment for key-category activities as ranked in action AI”*
3. *“Economic evaluation of environmental damage and especially on biodiversity”*

And deliverables:

1. *“Mapping of risk analysis factors in European and Greek Legislation”*
2. *“Review and mapping of risk analysis methodology”*
3. *“Determination of the examined categories of activities”*
4. *“Environmental risk assessment methodology and implementation for each examined activity category”*

- 2. 15/07/2019 – 06/05/2022: "Exploring strategies for the transition of a local government organisation to the smart cities community by implementing new systems of innovation, entrepreneurship and technology. Pilot implementation in the Municipality of Elefsina with special consideration of the interactions with the National Technical University of Athens"**: Municipality of Elefsina - National Technical University of Athens

Postdoctoral Researcher with participation in the following tasks:

1. *Development of an Assessment Tool for the inventory of the current state regarding the actions and existing systems of a smart city of less than 50,000 inhabitants.*
2. *Pilot mapping of the existing situation in the Municipality of Elefsina.*
3. *Development of proposals for the transition to smart city communities in the fields of environment, energy, waste management and climate change.*
4. *Participate in the writing of a research publication on the transition of a local authority to smart cities, through a set of proposals and comparison with international literature in the fields of energy and environment.*
5. *Search and record all national and EU financial instruments for the implementation of actions for the transition of a municipality of less than 50,000 inhabitants to the smart cities' community.*
6. *Participate in the preparation of 5 reports on all open calls for all available national and European financial instruments.*
7. *Participation in the writing of a scientific paper on the analysis of financial instruments, comparative evaluation and new framework for their use by an OTA in a scientific international conference.*
8. *Participation in writing detailed technical and financial descriptions to make specific proposals for the transition to the smart cities community.*

3. **02/07/2018 – 31/07/2018: "Research Activities of Environmental Economics and Sustainability Unit (ESU)"** Environmental Economics and Sustainability Unit (ESU), School of Mechanical Engineering, National Technical University of Athens

Postdoctoral Researcher

4. **01/10/2014 – 30/06/2015: «Pay As You Throw [PAYT]»** Research project in the framework of the national scale action "SYNERGY 2011", co-funded by the European Union (European Regional Development Fund) and national resources through the Operational Programme "Competitiveness and Entrepreneurship" and the Regional Enterprise Programmes of the 5 Regions of Transitional Support of the ESPA 2007-2013..

Researcher engineer

5. **02/01/2013 – 30/09/2015 «Implementation of LNG fuel in commercial ship propulsion plants [LNG-COMSHIP]»** Research project co-funded by the European Union (European Regional Development Fund) and national resources, in the framework of the action: "Bilateral R&D Cooperation between Greece and China 2012-2014", of the Operational Programme "Competitiveness and Entrepreneurship" (EPAN II), ESPA 2007-2013.

Engineering researcher participating in the following tasks:

*EE 1.1 Computational Analysis of Diesel-LNG fuel engines*

*EE 2.3 Computational studies on ship LNG storage and engine feeding system*

*EE 5.1 LNG fuel land based installations*

*EE 5.2 LNG fuel bunkering*

*EE 6.1 Economical evaluation of LNG fueled ships*

*EE 6.2 Environmental evaluation of LNG fueled ships*

And deliverables:

*II1.1 Technical report "Diesel-LNG combustion modelling typical results and experimental verification"*

*II2.2 Technical report "Design study of ship piping systems and machinery for LNG fuel"*

*II5.1 Technical report "Evaluation of LNG fuel bunkering alternatives"*

*II6.1 Technical report "Economical evaluation of LNG fueled ships"*

*II6.2 Technical report "Environmental evaluation of LNG fueled ships"*

- 6. 16/04/2014 – 31/10/2014: "Digital and Embedded Systems - Industrial Applications of Cutting Edge"** The project was implemented through the Operational Programme "Education and Lifelong Learning" with the co-financing of the European Union (European Social Fund - EKT) and national funds and is part of the general framework of the operations "Lifelong Learning Programmes for the updating of knowledge of graduates of higher education institutions" of the category "Lifelong Learning Programmes".

- 7. 10/04/2013 – 09/01/2014: "Integrated System for Continuous Monitoring of Pollutant Emissions & Optimal Management of Energy Operational Parameters of Ships [e-greenship]"** Research project co-funded by the European Union (European Regional Development Fund) and national resources, under the action "Cooperation" - Action I of the Operational Programme "Competitiveness and Entrepreneurship" (EPAN II), ESPA 2007-2013.

Research Engineer with participation in the following tasks:

*E6.1 Development of multi-criteria analysis methods*

*E6.2 Identification of alternative ship management scenarios*

*E6.3 Development of techniques and decision making system*

*E7.1 Development of a repertoire of test scenarios and test execution plan*

*E7.2 Execution of Operational and Performance Tests*

And deliverables:

*II6.1 Comparative analysis of at least three different of the most prevalent decision support methods for scenario comparison and classification*

*II7.1 Control scenario repertoire & execution plan*

*II7.2 Functionality and performance test execution report*

## **4.2. Projects**

**01/09/2020 – 30/09/2020: "Study for the Development of a Self-Assessment Tool for the Digital Footprint of Eurobank Ergasias S.A."** Project leader: MANTIS business innovation

## **5. List of publications**

**Citations (12/2023)**

Scopus: **416** (*h-index: 6*) <https://www.scopus.com/authid/detail.uri?authorId=56976327600>

Google Scholar: **597** (*h-index: 6*)

<https://scholar.google.com/citations?user=rIfTjAAAAAJ&hl=el&oi=ao>

### **5.1. Publications in international journals**

- 1. Eleni Strantzali**, Georgios A. Livanos, Konstantinos Aravossis, “A Comprehensive Multicriteria Evaluation Approach for Alternative Marine Fuels”, *Energies*, Volume 16, Issue 22, 7498, doi:10.3390/en16227498, 2023
- Christos Nikoloudis, Konstantinos Aravossis, **Eleni Strantzali**, Nikos Chrysanthopoulos, “A novel multicriteria methodology for evaluating urban development proposals”, *Journal of Cleaner Production*, Volume 263, 120796, 2020
- Eleni Strantzali**, Konstantinos Aravossis, Georgios A. Livanos, Christos Nikoloudis, “A decision support approach for evaluating liquefied natural gas supply options: Implementation on Greek case study”, *Journal of Cleaner Production* Volume 222, pp: 414-423, 2019
- Eleni Strantzali**, Konstantinos Aravossis, Georgios A. Livanos, Nikos Chrysanthopoulos, “A Novel Multicriteria Evaluation of Small-Scale LNG Supply



Alternatives: The Case of Greece”, *Energies*, Volume 11, Issue 2, doi:10.3390/en11040903, 2018

5. Christos Nikoloudis, **Eleni Strantzali**, Konstantinos Aravossis, “On the comparative financial and risk analysis of urban development projects: the case of Athens’ Hellinikon airport”, *Progress in Industrial Ecology, An International Journal*, Volume 11, No 1, pp: 16–29, 2017
6. **Eleni Strantzali**, Konstantinos Aravossis, Georgios Livanos, “Evaluation of future sustainable electricity generation alternatives: The case of a Greek island”, *Renewable and Sustainable Energy Reviews*, Volume 76, pp: 775–787, 2017
7. **Eleni Strantzali**, Konstantinos Aravossis, “Decision making in renewable energy investments: A review”, *Renewable and Sustainable Energy Reviews*, Volume 55, pp: 885–898, 2016

## 5.2. Publications in international conferences (review based on full paper)

- 1) **E. Strantzali**, N. Panopoulos and K. Aravossis, “*Financial assessment of small-scale LNG terminal for the case of Patra’s port*”, 8th International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 2021) and SECOTOX Conference, 20-24 July 2021, Thessaloniki, Greece
- 2) C. Nikoloudis, **E. Strantzali**, T. Tounta, K. Aravossis, A. Mavrogiannis, A. Mytilinaioy, E. Sitzimi and E. Violeti, “*An Evaluation Model for Smart City Performance with Less Than 50,000 Inhabitants: A Greek Case Study*”, 9<sup>th</sup> International Conference on Smart Cities and Green ICT Systems (SMARTGREENS), 2-4 May 2020, Prague, Czech Republic
- 3) S. Dimitrellou, **E. Strantzali**, D-N. Pagonis, G.A. Livanos, “*Retrofit of a Ro-Ro passenger ferry to operate on LNG fuel: A greener and safe solution for short-sea transportation.*”, *Sustainable and Safe Passenger Ships*, 4 March 2020, Athens, Greece
- 4) **E. Strantzali**, S. Papathomopoulos, K. Aravossis, “*Economic Evaluation of small-scale LNG terminals: The case of Greece*”, 7<sup>th</sup> International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 2019) and SECOTOX Conference, 19-24 May 2019, Mykonos island, Greece
- 5) **E. Strantzali**, C. Nikoloudis, K. Aravossis, G. A. Livanos, “*Multicriteria evaluation of liquefied natural gas supply alternatives: The case of Greece*”, 18th European Roundtable on Sustainable Consumption and Production Conference (ERSCP 2017), 1-5 October 2017, Skiathos
- 6) Christos Nikoloudis, **Eleni Strantzali** and Konstantinos Aravossis, “*Applying the multicriteria method Promethee II for the startup ranking during a business ideas*

*competition*”, 6<sup>th</sup> International Symposium and 28<sup>th</sup> National Conference on Operational Research, 8-10 June 2017, Thessaloniki

- 7) K. Aravossis, C. Nikoloudis, N. Chrysanthopoulos, **E. Strantzali**, “*A multicriteria decision support system for evaluating urban development proposals: The case of Athens’ Hellinikon airport*”, 5<sup>th</sup> International Symposium and 27<sup>th</sup> National Conference on Operational Research, 9-11 June 2016, Athens
- 8) G.A. Livanos, S. Dimitrellou, **E. Strantzali**, G. Theotokatos, “*Evaluation of LNG Bunkering Concept for Greek Sea Territory*”, International Conference ‘Science in Technology’ SCinTE 2015, 5-7 November 2015, Athens
- 9) G. A. Livanos, S. Dimitrellou, **E. Strantzali**, G. Theotokatos, “*Economical and environmental evaluation of an open-type ferry converted to use LNG fuel*”, International Conference on Shipping in Changing Climates (SCC 2015), 24-26 November 2015, University of Strathclyde, Glasgow, Scotland, United Kingdom
- 10) G. Theotokatos, G.A. Livanos, S. Dimitrellou, **E. Strantzali**, D.-N. Pagonis, K. Politis, A. Theodoulides, D. Peirounakis, P. Mizithras, “*Design of LNG storage and feeding system for an open type ferry*”, Towards Green Marine Technology and Transport - Proceedings of the 16<sup>th</sup> International Congress of the International Maritime Association of the Mediterranean (IMAM 2015), 21-24 September 2015, Pula, Croatia, pp: 473-481
- 11) G. Theotokatos, G.A. Livanos, **E. Strantzali**, S. Dimitrellou, D-N. Pagonis, D. Peirounakis, P. Mizithras, “*Computational investigation of LNG storage tank for open type ferries*”, Towards Green Marine Technology and Transport - Proceedings of the 16<sup>th</sup> International Congress of the International Maritime Association of the Mediterranean (IMAM 2015), 21-24 September 2015, Pula, Croatia, pp: 465-472

### **5.3. Publications in international conferences (review based on abstract)**

1. **E. Strantzali**, K. Papageorgiou and K. Aravossis, «*Multicriteria Evaluation of LNG Supply Alternatives for the case of Alexandroupolis Floating Storage and Regasification Unit (FSRU)*» 8th International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 2021) and SECOTOX Conference, 20-24 July 2021, Thessaloniki, Greece
2. T. Tounta, **E. Strantzali**, C. Nikoloudis, K. Aravossis, A. Mavrogiannis, A. Mytilinaioy, I. Sitzimi, E. Violeti. “*An evaluation model for small “smart” cities footprint (with less than 50.000 inhabitants)*”. Proceedings of Greentech Sumposium, Startupnow Forum 2019, 23-24 October 2019, Technopolis, Athens

3. K. Aravossis, **E. Strantzali**, C. Mouselimos, “*Evaluation of Waste-to-Energy Technologies for Non-recyclable Plastic Waste*”, 7th International Conference on Sustainable Solid Waste Management, 26–29 June 2019, Crete Island, Greece
4. **E. Strantzali**, S. Dimitrellou, K. Aravossis, G. A. Livanos, F. Magana, “*A Methodological Approach for Sustainable Energy Planning in Decentralised Regions: The case of Greek islands*”, INTERNATIONAL CONGRESS on ENGINEERING and ARCHITECTURE (ENAR– 2018), 14-16 November 2018, Alanya / Turkey
5. C. Nikoloudis, **E. Strantzali**, K. Rentzis, K Aravossis, “*A new multicriteria method for evaluating urban development proposals*”, 18th European Roundtable on Sustainable Consumption and Production Conference (ERSCP 2017), 1-5 October 2017, Skiathos
6. C. Nikoloudis, **E. Strantzali**, K. Rentzis, K Aravossis, “*How to evaluate new ventures - startups in the field of environment, energy and ecology*”, 18th European Roundtable on Sustainable Consumption and Production Conference (ERSCP 2017), 1-5 October 2017, Skiathos

#### 5.4. Publications in national conferences (review based on full paper)

1. Χρήστος Νικολούδης, **Ελένη Στράντζαλη**, Κωνσταντίνος Αραβώσης, “*Συγκριτική χρηματοοικονομική αξιολόγηση και ανάλυση κινδύνου σε έργα αστικής ανάπτυξης: Η περίπτωση του πρώην αεροδρομίου στο Ελληνικό*”, 4<sup>ο</sup> Πανελλήνιο Συνέδριο «Οικονομική Φυσικών Πόρων και Περιβάλλοντος», 4-5 Νοεμβρίου 2016, Πανεπιστήμιο Θεσσαλίας, Βόλος

#### 5.5. Book chapters

1. T. Tounta, **E. Strantzali**, C. Nikoloudis, and K. Aravossis, “Correlation of Weights in an Evaluation Model for Smart City Proficiency with Less Than 50,000 Inhabitants: A Greek City Case Study”, Springer Nature Switzerland AG 2021, Communications in Computer and Information Science, Volume 1475, Pages 31 – 45, ISBN 978-3-030-89169-5
2. **Ε. Στράντζαλη**, Κ. Αραβώσης, Κεφάλαιο: «Συστήματα Υποστήριξης Αποφάσεων στην Τεχνικο-οικονομική Αξιολόγηση Επενδύσεων Ενέργειας», σελ. 321-368, του Βιβλίου «Ενέργεια: Δίκτυα και Υποδομές», εκδόσεις ΝΟΜΙΚΗ ΒΙΒΛΙΟΘΗΚΗ, 2014 <https://www.nb.org/greek/energeia-diktua-ypodomes.html>

## **6. Member of Scientific Committees**

### **6.1. Editing of scientific journal issues**

Guest Editor of Special Issue “Techno-Economic Analysis and Optimization for Energy Systems”, Energies, MDPI,

[https://www.mdpi.com/journal/energies/special\\_issues/7J53C91GKC](https://www.mdpi.com/journal/energies/special_issues/7J53C91GKC)

### **6.2. Associate member of UNESCO Chair**

Associate member at the **UNECO Chair on Green Innovation and Circular Economy of the National Technical University of Athens**, which is incorporated in the Environmental Economics and Sustainability Unit (ESU) of the School of Mechanical Engineering.

<https://unescochair.simor.ntua.gr/>

### **6.3. Reviewer in scientific journals**

- Renewable and Sustainable Energy Reviews, ELSEVIER
- Automation in Construction, ELSEVIER
- Environmental Science and Pollution Research, Springer
- Energies, MDPI
- Environmental Assessment Policy and Management, World Scientific
- Journal of Marine Science and Engineering, MDPI
- Sustainability, MDPI

### **6.4. Participation in conference committees**

1. Member of the Organizing and Scientific Committee of the Conference “**18<sup>th</sup> European Roundtable for Sustainable Consumption and Production - ERSCP 2017**”, 1-5 October 2017, Skiathos Island, Greece
2. Member of the Organizing and Scientific Committee of the Conference **Greentech Symposium – StartupNow Forum**
  - i. 23-24 November 2018, Elefsina hotel
  - ii. 23-24 October 2019, Technopolis, Athens
3. Member of the Scientific Committee of the **9<sup>th</sup> International Symposium and 31<sup>st</sup> National Conference on Operational Research**, 29-30 June & 1 July 2023, Athens, Greece

### **6.5. Participation in the organisation of annual competition**

Member of the Organizing Committee of the **Greentech Challenge by ESU NTUA**, which is organized every year by Environmental Economics and Sustainability Unit (ESU), NTUA