

CURRICULUM VITAE

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Education

2015 – **City, University of London, UK**
2019 Doctor of Philosophy (Ph.D.) in Structural Engineering
Ph.D. Thesis Topic: ***The effect of multi-angle spatially variable ground motions on the seismic behaviour of cable-stayed bridges***
Supervisor: Dr. Alfredo Camara

2015 – **City, University of London, UK**
2016 Introductory Certificate in Teaching in Higher Education; part of Master of Arts (MA) Learning, Teaching and Assessment
Project title: ***Preparation of an assessment plan for a module from the position of the module coordinator***

2011 – **University of Surrey, UK**
2012 Master of Science (MSc) in Bridge Engineering
Dissertation title: ***Dynamic analysis of a prestressed concrete highway bridge***
Advisor: Dr. Imran Rafiq

2005 – **Democritus University of Thrace (DUTH), Xanthi, Greece**
2011 **5-year Dipl.**, M. Eng. in Civil Engineering with specialization in Structural Engineering
Thesis Topic: ***Behaviour of reduced beam section (rbs) bolted moment connections under cyclic loading; Experimental study***
Supervisor: Professor Christos Kalfas

Research Interests

- Structural Dynamics
- Nonlinear Mechanics
- Earthquake Engineering
- Engineering Seismology
- Bridge Engineering
- Rocking Isolation
- Response Modification Techniques
- Sustainable Design

Research Impact

Google Scholar: Citations 79, h-index 4, i10-index 3, **Scopus:** Citations 53, h-index 4

Professional Experience

2021 – **Assistant Professor of Civil Engineering**, York College of Pennsylvania, PA, USA
present

2019 – **Postdoctoral Research Fellow**, Southern Methodist University, TX, USA

2021 Supervisor: Professor Nicos Makris

2019 – **Laboratory Coordinator**, Southern Methodist University, TX, USA

2021

2019 – **FE exam Tutor**, Southern Methodist University, TX, USA

2021

2018 – **Assistant Bridge Engineer**, Arcadis NV, London, UK

2019

2015 – **Research Assistant**, City, University of London, UK

2019 Supervisor: Dr. Alfredo Camara

2016 – **Teaching Assistant and Laboratory Instructor**, City, University of London, UK

2019

2012 – **Civil Engineer**, HYDROMON Consultants Llp, Athens, Greece

2015

2011 **Research Assistant**, Laboratory of Steel Structures, DUTH, Xanthi, Greece
Supervisor: Professor Christos Kalfas

Awards/Distinctions

2022 **Fellow of the ASCE Excellence in Civil Engineering Education (ExCEEd)**, American Society of Civil Engineers (ASCE)

2022 **Travel Grant/Award** from the National Science Foundation (NSF) to attend the Natural Hazard Engineering Research Infrastructure (NHERI) Summer Institute for Early-Career Faculty

2021 **Honorary award for an early career female scientist in STEM after PhD** from the Greek Women in STEM organization at the 1st WOMEN+ Symposium

2018 Nomination: **Top 50 Women in Engineering: Returners and Transferrers**, Women's Engineering Society

2018 **Awarded annual membership** for the Women's Engineering Society

2018 **2nd Prize winner** of the poster competition at the 20th Young Researchers' Conference of the Institution of Structural Engineers (IStructE)

2016 **Shortlisted for the Outstanding Contribution Award** for the paper presented at the IABSE Symposium, Stockholm (Sweden)

2016 **Travel award** from the International Association for Bridge and Structural Engineering British Group (IABSE BG) for my presentation to the IABSE Symposium, Stockholm (Sweden), 2016

2016 **Associate Fellowship** award in the Higher Education Academy (AFHEA), UK

2015 **Scholarship** from City, University of London for the completion of the "*Introductory Certificate in Teaching in Higher Education*" part of MA degree in Academic Practice

2015 **Shortlisted for the Outstanding Contribution Award** for the paper presented at the IABSE Symposium, Geneva (Switzerland)

2015 – **Travel award** from City, University of London for the attendance of international conferences (Publications J6, C1, C2, C4, C6, C7)

2015 – **Yearly scholarships of excellence** from the Research Centre in Civil Engineering Structures (RCCES) at City, University of London

2011 **Top 2%** of the 2011 graduates from the School of Civil Engineering from the Democritus University of Thrace

2003 **Distinction** awarded in Greek national competition for the creation of an educational CD-ROM in the topic of astrobiology with title '*Life here, there! Everywhere?*'.

Refereed Journal Publications

J.1. **Efthymiou, E.**, Makris, N. (2022), "Pulse-period–moment-magnitude relations derived with wavelet analysis and their relevance to estimate structural deformations", *Earthquake Engineering & Structural Dynamics*, Vol. 51(7), pp. 1636–1656. <https://doi.org/10.1002/eqe.3631>

J.2. **Efthymiou, E.**, Camara, A. (2022), "Multi-angle and nonuniform ground motions on cable-stayed bridges", *Earthquake Spectra* Vol. 38(2), pp. 1438–1462. <https://doi.org/10.1177/87552930211051393>

J.3. **Efthymiou, E.**, Camara, A. (2022), "Damage propagation and probability of failure in cable-stayed bridges subjected to spatially variable ground motions" (under preparation)

J.4. **Efthymiou, E.**, Camara, A. (2021) "Inelastic response of cable-stayed bridges subjected to non-uniform motions", *Bull Earthquake Eng.* Vol. 19(6), pp. 2691–2710. <https://doi.org/10.1007/s10518-021-01079-z>

J.5. Makris, N., **Efthymiou, E.** (2020), "Time-response functions of fractional-derivative rheological models", *Rheologica Acta*, Vol. 59(12), pp. 849–873. <https://doi.org/10.1007/s00397-020-01241-5>

J.6. **Efthymiou, E.**, Camara, A. (2017), "Effect of spatial variability of earthquakes on cable-stayed bridges", *Procedia Engineering*, Vol. 199, pp. 2949–2954. <https://doi.org/10.1016/j.proeng.2017.09.427>

J.7. Camara, A., **Efthymiou, E.** (2017), "Deck–tower interaction in the transverse seismic response of cable-stayed bridges and optimum configurations", *Engineering Structures*, Vol. 124, pp. 494–506. <https://doi.org/10.1016/j.engstruct.2016.06.017>

Refereed Conference Publications

C.1. **Efthymiou, E.** (2023), "Effect of spatially variable ground motions on cable-stayed bridges", *Proceedings, Structures Congress 2023*, May 3 – 6, 2023, New Orleans, LA (USA)

C.2. **Efthymiou, E.**, Camara, A. (2021), "Ground motion spatial variability and cable-stayed bridges: do we need to consider the asynchronous motion?", *Proceedings, IABSE Congress Ghent*, September 22 – 24, 2021, Ghent (Belgium)

C.3. Camara, A., **Efthymiou, E.** (2018), "Optimum deck and tower configurations for the transverse seismic response of cable-stayed bridges", *Proceedings, 40th IABSE Symposium*, September 19 – 21, 2018, Nantes (France)

C.4. **Efthymiou, E.**, Camara, A. (2018), "Spatial variability effects on long-span cable-stayed bridges", *Proceedings, 16th European Conference on Earthquake Engineering* (16ECEE), June 18 – 21, 2018, Thessaloniki (Greece)

C.5. **Efthymiou, E.**, Camara, A. (2018), "Cable-stayed bridges under spatially variable ground motions", *Proceedings, 20th Young Researchers' Conference – Institution of Structural Engineers (20YRC-ISTRUe)*, April 10, 2018, London (UK) — **2nd Prize Winner – Poster Competition**

C.6. **Efthymiou, E.**, Camara, A. (2017), "The Effect of multi-angle, spatially variable seismic motions on cable-stayed bridges", *Proceedings, 6th International Conference*

on Computational Methods in Structural Dynamics and Earthquake Engineering (COMPDYN), June 15 – 17, 2017, Rhodes (Greece)

C.7. **Efthymiou, E.**, Kalfas, K., Flower, I. (2017), “Engineers for Overseas Development (EfOD): Inspiration and Development of Young Designers through Humanitarian Aid”, *Proceedings, IABSE Conference Bath*, April 19 – 20, 2017, Bath (UK)

C.8. **Efthymiou, E.**, Camara, A. (2016), “Spatially variable seismic ground motions and their effect on cable-stayed bridges: The role of the tower”, *Proceedings, 19th Congress of IABSE*, September 21 – 23, 2016, Stockholm (Sweden)

C.9. **Efthymiou, E.**, Camara, A. (2016), “Spatial Variability Effects of the Seismic Action in Cable-Stayed Bridges and Modelling Techniques”, *Proceedings, IABSE Conference Geneva*, September 23 – 25, 2015, Geneva (Switzerland)

Invited Talks

T.1. **Efthymiou, E.** (2021), “Seismic behavior of cable-stayed bridges”, Invited Speaker, ASCE Student Chapter at YCP, November 1, 2021

T.2. **Efthymiou, E.** (2017), “Alleviating poverty through volunteering and engineering”, Invited Speaker, Lunch & Learn with JACOBS Chelmsford office (UK), July 14, 2017

T.3. **Efthymiou, E.** (2016), “Effect of spatial variability of ground motion on the response of cable-stayed bridges”, Invited Speaker, City, University of London, London, June 8, 2016

Funded Projects

	Title & Funding Agency	Funding	Role	Period
FP.1.	Performance prediction of bridges against multi-support excitations and proposal of response modification strategies through cyber-physical testing — National Science Foundation (<i>to be submitted</i>)	Est. \$350,000	P.I.	TBD
FP.2.	Probability of occurrence of acceleration pulses in near-source ground motions and seismic response of masonry buildings through experimental and analytical work — National Science Foundation (<i>to be submitted</i>)	Est. \$300,000	P.I.	TBD

Student Mentorship

2022 – Primary Academic Advisor to four Sophomore and fifteen Freshmen Civil Engineering Students

2023 Capstone project – multiple senior students at YCP, Cumberland County Recycling Center, Summer 2022 semester, York College of Pennsylvania

2022 Capstone project – multiple senior students at YCP, White Mountain Apache Tribe Shade Structure, Summer 2022 semester, York College of Pennsylvania (secondary advisor)

2022 Independent Study – Connor Becker, Design and performance of timber structures, Summer 2022 semester, York College of Pennsylvania (secondary advisor)

2021 – 2022 Primary Academic Advisor to four Freshmen Civil Engineering Students

2017 BSc Dissertation – N. Sadeghi, Influence of the spatial variability of the ground motion on the seismic response of cable-stayed bridges, July 2017, City, University of London

Memberships in Professional Institutions/Organizations

American Society of Civil Engineers (ASCE – Elected Member), 2020
Earthquake Engineering Research Institute (EERI), 2021
American Institute of Steel Construction (AISC), 2022
American Concrete Institute (ACI), 2021
International Association for Bridge and Structural Engineering (IABSE – Individual Member), 2013
IABSE Young Engineers Programme (YEP) Board (Elected Member), 2016
Higher Education Academy (HEA – Associate Fellow), UK, 2016
Chartered Member of the Technical Chamber of Greece, 2011
Hellenic Society of Earthquake Engineering (Selected Member), 2017
Association of Civil Engineers of Greece (Individual Member), 2011

Referee Work – Official Reviewer in Engineering Journals

Bulletin of Earthquake Engineering
Journal of Low Frequency Noise, Vibration & Active Control

Member of Scientific Committees in International Conferences

IABSE Congress Nanjing, Bridges and Structures: Connection, Integration and Harmonisation, September 21 – 23, 2022, Nanjing, China
IABSE Congress Ghent, Structural Engineering for Future Societal Needs, September 22 – 24, 2021, Ghent, Belgium

Skills

Greek (native speaker), English (C2), French (B1)
High level of computer knowledge (Python, MATLAB, Mathcad, ABAQUS, AutoCAD, SolidWorks) and Structural Engineering Software Packages (SAP2000, ROBOT, MIDAS, Visual Analysis, OpenSees)

Volunteering

2021 Greek Women in STEM
2020 Graduate Women International; Independent Member
2018 – Women’s Engineering Society; Elected Board Member
2019
2017 – IABSE British Group; Elected Member of the Executive Committee
2019
2016 – Member and Chair of the London Branch; Engineers for Overseas Development (EfOD)
2019 Project: *“Design and construction of a block of sanitation cubicles based on the principles of eco-sanitation and a timber truss roof in Kumi Hospital, Kumi District, Uganda”*
2015 Royal Academy of Engineering; *Ingenious Awards Chain Reaction Project*