Stefanos D. Nikolopoulos

MSC CIVIL ENGINEER · PHD CANDIDATE

Athens, Greece

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Education

National Technical University of Athens
Athens, Greece

PhD Candidate at the Laboratory of Structural Analysis and Antiseismic Research - MGroup *Sep. 2019 - now*
- Research field: Machine Learning, Data-Driven Modeling, Physics Informed Neural Networks
- Supervisor: Professor Papadopoulos Vissarion

National Technical University of Athens
Athens, Greece

MSc "Applied Mechanics" *Sep. 2017 - July 2019*
- Grade: 9.13/10
- Thesis title: "Analysis of the Tilted Shallow Wedge Problem in Couple-Stress Elasticity"
- Supervisor: Assistant Professor Zisis Athanasios

Athens University of Economics and Business
Athens, Greece

"Coding Bootcamp 6" /HEPIS-CEPIS, Java Full Stack Developer *Oct. 2018 - Apr. 2019*

Programming Languages: Python, C#, Java, Javascript, Relational Databases, mySQL, Version Control (Git), etc.

University of Patras
Patras, Greece

M.eng in Civil Engineering *Sep. 2010 - Nov. 2015*
- Grade: 7.29/10
- Thesis title: "The effect of multiple earthquakes in the response of steel structures"
- Supervisor: Dr. Papagiannopoulos G.

Experience

National Technical University of Athens
Athens, Greece

PhD Researcher - Projects *Sep. 2019 - now*
- Novel data driven surrogate modeling for parametrized dynamic systems
- Data analysis of a drug study experiment based by image cytometry
- Solution of partial differential equations with physics informed neural networks
- Surrogate modeling of brain tumor growth based on convolutional autoencoders

Sougiannis ArchLab
Athens, Greece

Civil and Structural Engineer *Sep. 2018 – Sep. 2019*
- Structural analysis and design
- Architectural design
- Topographic surveys

Lazarou I. Engineering Office
Athens, Greece

Civil and Structural Engineer *Sep. 2016 - Jul. 2017*
- Structural analysis and design
- Topographic surveys
- Construction supervision

Publications

Elsevier - Engineering Structures

"Machine Learning Accelerated Transient Analysis of Stochastic Nonlinear Structures" *Feb. 2022*

Elsevier - Engineering Applications of Artificial Intelligence

"Non-intrusive surrogate modeling for parametrized time-dependent partial differential equations using convolutional autoencoders" *Jan. 2022*

Springer - Journal of Elasticity

"Analysis of the Tilted Shallow Wedge Problem in Couple-Stress Elasticity" *Jun. 2021*

International Congress on Computational Mechanics (10th GRACM)

"A Data-Driven Surrogate for parametrized time-dependent PDEs based on Convolutional Autoencoders" *Jul. 2021*

Congress WCCM & ECCOMAS 2020

"An Autoencoder-Based Surrogate Modeling Approach for Parametrized Time-Dependent PDEs" *Jan. 2021*

XI International Conference on Structural Dynamics (EURODYN)

"A Machine Learning Approach for Parametric Time-History Analysis" *Nov. 2020*

Scholarships

National Technical University of Athens *Athens, Greece*

Covers cost of PhD research *2019 - now*

Athens University of Economics and Business, Coding Bootcamp 6 *Athens, Greece*

Total cost of tuition *2018 - 2019*

Certificates

Software Developer Advanced Certificate *Athens, Greece*

PEOPLECERT *May 2019*

• Java, Python, C#, Object Oriented Programming, Relational Databases, Front-end, Back-end.

First Certificate in English (B2 level) *Pirgos, Greece*

UNIVERSITY OF CAMBRIDGE *Jun. 2007*

Digital skils

Programing languages

• Python (Tensorflow - Keras, Pytorch), Java, C#, mySQL, Matlab, Wolfram Mathematica

Software

• Sap2000, Etabs, Fespa, Abaqus, Ansys, AutoCAD

Other information

- **Member of Technical Chamber of Greece:** Athens department
- **Drivers licence:** Category B
- **Military obligations:** Fulfilled
- **Interests:** Traveling, basketball, music