

SERAFEIM BAKALAKOS

School of Civil Engineering, National Technical University of Athens
Laboratory of Structural Analysis and Antiseismic Research
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EDUCATION

Ph.D. in Computational Mechanics

Sep 2017 - Present

National Technical University of Athens

School of Civil Engineering

Institute of Structural Analysis & Antiseismic Research

Ph.D. thesis title: *Advanced high performance computing methods in extended finite element method for crack propagation and material design applications*

M.Sc. in Analysis and Design of Structures

Sep. 2015 – Oct. 2017

National Technical University of Athens

School of Civil Engineering

Diploma in Civil Engineering

Sep. 2009 – Oct. 2015

National Technical University of Athens

School of Civil Engineering

Specialization: *Structural Engineering*

TECHNICAL & OTHER SKILLS

Programming Languages	C#, Java, C/C++, CUDA C, Python, Javascript
Scientific Software	MATLAB, Abaqus, Paraview
Other Software	LaTeX, Microsoft Office, Autocad
Languages	Greek, English (Proficiency of Cambridge), German (Zertifikat Goethe)

PUBLICATIONS IN SCIENTIFIC JOURNALS

1. **Bakalagos S.**, Kalogeris I., Papadopoulos V., Papadrakakis M., Maroulas P., Dragatogiannis D.A., Charitidis C.A., *An integrated XFEM modeling with experimental measurements for optimizing thermal conductivity in carbon nanotube reinforced polyethylene*, Modelling and Simulation in Materials Science and Engineering, 2022
2. **Bakalagos S.**, Kalogeris I., Papadopoulos V., *An extended finite element method formulation for modeling multi-phase boundary interactions in steady state heat conduction problems*, Composite Structures, vol. 258, 2021

PUBLICATIONS IN CONFERENCE PROCEEDINGS

1. **Bakalakov S.**, Georgioudakis M., Papadrakakis M., *Domain Decomposition Methods for Crack Growth Problems Using XFEM*, 7th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (COMPDYN), Crete, Greece, 24-26 June 2019

CONFERENCE PRESENTATIONS

1. Kalogeris I., Pyrialakos S., **Bakalakov S.**, Kokkinos O., Papadopoulos V., Christodoulou T., *Machine learning-assisted Stochastic Optimization of Structures comprised of Nano-reinforced Concrete*, 10th GRACM International Congress on Computational Mechanics”, Virtual Congress, 5-7 July 2021
2. **Bakalakov S.**, Georgioudakis M., Papadrakakis M. *A study on solution algorithms for crack growth problems using XFEM*, 9th GRACM International Congress on Computational Mechanics”, Chania Crete, Greece, 4-6 June 2018

TEACHING EXPERIENCE

- Teaching assistant in National Technical University of Athens, Department of Civil Engineering
Course: **Computational Techniques and Solution Algorithms** (graduate course)

PARTICIPATION IN RESEARCH PROJECTS

- *Data driven computational mechanics at exascale (DCoMEX)*, under the call H2020-JTIEuroHPC-2019-1, Budget: 3.000.000 €, project’s duration 3 years (Participation: 15/9/2021 - present)
- *An integrated cloud platform for the simulation and standardization of high performance materials and products (Materialize – MIS 5129436)*, European Regional Development Fund and Greek National Funds through the Operational Program Competitiveness, Entrepreneurship and Innovation, under the call Research-Create-Innovate (2nd Cycle), Budget: 201.300 €, project’s duration 3 years (Participation: 1/10/2021- present)
- *Optimal multiscale design of innovative materials for heat exchange applications, (HEAT-68/1286)*, European Regional Development Fund and Greek National Funds through the Operational Program Competitiveness, Entrepreneurship and Innovation, under the call Research-Create-Innovate, Budget: 800.000 €, project’s duration 3 years (Participation: 10/12/2018-31/12/2019)
- *Mastering the computational challenges in numerical modeling and optimum design of CNT reinforced composites, (MASTER)*, European Research Council Advanced Grant. Budget: 2.500.000 €, project’s duration 5 years (Participation: 2/1/2013-28/2/2018)

AWARDS & DISTINCTIONS

- Scholarship for Ph.D. dissertation from Special Account for Research Funding (E.L.K.E.) of National Technical University of Athens (N.T.U.A.), duration: 2017-2021
- Limmat Stiftung Award: Great Undergraduate Performance - 1st in Class of 2015, School of Civil Engineering, National Technical University of Athens