

Prof. PHAEDON-STELIOS KOUTSOURELAKIS

Personal information

Boltzmannstrasse 15 85748 Garching Telephone: +49.89.289.16690
Technische Universität München, Munich, Germany Fax: +49.89.289.15242
Garching, 85748 p.s.koutsourelakis@tum.de <http://www.contmech.mw.tum.de/>
ORCID-ID: <https://orcid.org/0000-0002-9345-759X>

Education

- 1998 Diploma, National Technical University of Athens, Athens, Greece, Civil Engineering.
- 2000 M.A., Princeton University, Princeton, NJ, Civil Engineering and Operations Research.
- 2003, Ph.D., Princeton University, Princeton, NJ, Civil Engineering and Operations Research

Employment history

Current Appointments

- 2012 - present, Chair, Continuum Mechanics Group, Technical University Munich, Germany.

Earlier Appointments

- 2003-2005, Postdoctoral Fellow, Institute of Engineering Mechanics, Leopold-Franzens University, Innsbruck, Austria.
- 2005-2007, Research Scientist, Applied Statistics Group, Systems and Decision Sciences, Lawrence Livermore National Laboratory, Livermore, CA.
- 2007 -2011 Assistant Professor, Civil and Environmental Engineering- Center for Applied Mathematics, Cornell University, Ithaca, NY.
- 2012 Visiting Senior Lecturer, Heriot-Watt University, UK.

Institutional responsibilities

Chair, Professur für Kontinuumsmechanik, Faculty of Mechanical Engineering, Technical University of Munich, Germany

Approved research projects

- *Physics-Informed Learning for Multiscale Systems (PILgRIMS)*. Funding Agency: DARPA, USA. Amount: 500,000 + 500,000 USD. Role: Co-PI.
- *Electromagnetic Signal-to-Noise Analyzer*. Funding Agency: ZIM, German Ministry of Economy and Energy. Amount: 173,000 EUR. Role: PI.
- *Efficient Bayesian Multi-fidelity Schemes for Analysis and Design of Complex Multiphysics Systems*. Funding Agency: DFG. Amount: 190,000 EUR. Role: PI.
- *Predicting macroscopic behavior from Microscopic Simulators (PROMISE)*. Funding Agency: TUM Institute for Advanced Studies. Amount: 40,000 EUR. Role: Coordinator.
- *Multi-Scale Fusion of Information for Uncertainty Quantification and Management in Large-Scale Simulations (MURI)*. Funding Agency: AFOSR. Amount: \$198,000 (base period) 207,000 (2-year additional option period), Duration: 9/2009-8/2012 (base period), 9/2012-8/2013 (option period) Role: Co-PI (PI: G. Karniadakis, Brown University, in collaboration with MIT, Cornell University, and Caltech).
- *Arterial Properties from Stimulated Acoustical Emission*. Funding Agency: NIH. Amount: \$150,000. Duration: 9/2009-8/2011. Role: Co-PI (PI: Dr. J. Greenleaf, Mayo Clinic), Cornell PI: Prof. W. Aquino.
- *Parallel Stochastic Search and Reduced Order Modeling Strategies in Support of Hull Structure Health Monitoring*. Funding Agency: ONR. Amount: \$18,687. Duration: 4/2009-3/2011. Role: Co-PI (PI: Prof. C. Earls - Cornell University).

- *Analysis and Sensitivity of Uncertain Systems through Advanced Stochastic Simulation*. Funding Agency: Lawrence Livermore National Laboratory, Amount: \$50,000, 2007 (PI). Foundation (FWF), Amount: 111,138 *Euros*, 2005 (Co-PI).

Supervision of junior researchers at graduate and postgraduate level.

I. Bilonis (2013, PhD), R. Sternfels (2013, PhD), I. Franck (2017, PhD), M. Schöberl (2014-, PhD), C. Grigo (2015-, PhD), M. Koschade (2017-, PhD), L. Berardocco (2017-, Ph.D), S. Kaltenbach(2018-, PhD).

Teaching activities

- At Technical University of Munich: Primary Lecturer for 4 undergraduate and 4 graduate-level courses.
- At Cornell University: Primary Lecturer for 2 undergraduate and 2 graduate-level courses

Memberships in panels, boards, etc., and individual scientific reviewing activities

- Referee for the following Journals: SIAM Journal for Uncertainty Quantification, International Journal for Numerical Methods in Biomedical Engineering, Journal of Computational Physics, Inverse Problems, Theoretical and Computational Fluid Dynamics, Computer Methods in Applied Mechanics and Engineering, Probabilistic Engineering Mechanics, American Institute of Aeronautics and Astronautics (AIAA) Journal, Journal of Engineering Mechanics, Computers and Structures, Structural Engineering and Mechanics, Journal of Mechanics of Materials and Structures, Structural Safety
- NSF Review Panel (Program: Mechanics of Materials), January, 2010.
- Editorial board: International Journal for Uncertainty Quantification.

Active memberships in scientific societies, fellowships in renowned academies

- Society of Industrial and Applied Mathematics (SIAM), USA

Organisation of conferences

- Co-organizer of mini-symposium Bayesian formulations for system identification, modeling and prediction, SIAM Conference on Computational Science and Engineering, 2-6 March 2009.
- Co-organizer of symposium on “Big Data and Predictive Computational Modeling”, TUM-IAS, May 18-21 2015, Munich, Germany.
- Co-organizer of minisymposium *Towards Data-driven, Predictive Multiscale Simulations*. SIAM Conference on Uncertainty Quantification, April 2016. Lausanne, Switzerland
- Co-organizer of minisymposium *Towards a Unifying Probabilistic Framework for Scientific Computations Under Uncertainty*, SIAM Conference on Uncertainty Quantification, April 2016. Lausanne, Switzerland.
- Co-organizer of symposium on “Machine Learning Challenges in Complex Multiscale Physical Systems”, TUM-IAS, January 9-12 2017, Munich, Germany.
- Organizer of mini-symposium on “Machine learning strategies for computer simulation of physical systems”, SIAM Conference on Computational Science and Engineering, March 2019.

Prizes, awards, fellowships

- Fellowship from the Center for Interdisciplinary Research, University of Bielefeld (ZiF) and the Cooperation Group on Multiscale modeling of tumor initiation, growth and progression: From gene regulation to evolutionary dynamics, 2016.
- Top Teaching Trophy 2013,2014,2015, Munich School of Engineering (Uncertainty Modeling in Engineering 6th semester).
- Dean’s First Year Merit Prize in Recognition of Outstanding Record, **Princeton University 1998**
- Prize for Excellence in Academic Performance, **National Technical University of Athens 1994,1997,1998**