KYRIAKOS KANDRIS

SCIENTIFIC MACHINE LEARNING ENGINEER

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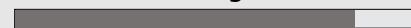
in linkedin.com/in/kyriakoskandris84/

EDUCATION

April 2017
National Technical University of Athens, Greece
PhD in Civil Engineering

July 2010
National Technical University of Athens, Greece
MSc in Water Resources Science and Technology

May 2008
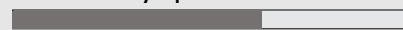**National Technical University of Athens, Greece**
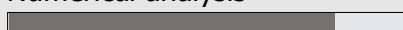*MEng in Civil Engineering*

SKILLS

Ensemble learning methods

Probabilistic machine learning

Optimization

Uncertainty quantification

Numerical analysis

Matlab/GNU Octave programming

R programming

Julia programming

PERSONAL STATEMENT

My primary research and professional interests fall within the field of Hydroinformatics. Specifically, my work revolves around (a) the development and coding of numerical, statistical, and machine learning models for the prediction of water quality processes, and (b) the development of operational decision support systems for professionals and regulators in the domain of water resources. My research activity includes participation in seven sponsored research projects and 24 publications in Journals and Conference Proceedings. I am also a journal peer reviewer at Environmental Modeling & Software, the Bulletin of Environmental Toxicology and Contamination, and the Bioremediation Journal.

PROFESSIONAL RECORD

September 2022–Present
Senior Research Fellow in Environmental Engineering
Brunel University London, London, UK

- Developing and applying unsupervised learning techniques to find trends and patterns in data and derive insights on the performance of water and wastewater treatment processes
- Developing and applying machine learning techniques to optimize the performance of water and wastewater treatment utilities and support their carbon neutrality plan
- Integrating mechanistic and data-driven techniques for the modelling of water systems (Hybrid differential equations)

April 2017–August 2022
Research Associate
Emvis Consulting Engineers SA, Athens, Greece

- Developed and benchmarked (a) numerical, process-based models, and (b) machine learning algorithms for the short-term forecasting of water quality processes
- Developed operational decision support tools and early warning systems for the management of surface waters
- Employed machine learning techniques to emulate water treatment processes
- Devised an error-correcting framework using machine learning algorithms to capture systematic errors in numerical models of water quality processes
- Formulated a metamodeling-based approach for constrained optimization problems
- Investigated computationally efficient ways to quantify uncertainty propagation in multi-model chains