

Post-Doctoral Position in Physics-Aware Machine Learning, Technical University of Munich, Faculty of Mechanical Engineering, Germany.

A post-doctoral position is available immediately in Physics-aware Machine Learning. The successful candidate will be expected to work at the interface of Computational Science & Engineering and Probabilistic Machine Learning. This involves the integration of physics-based models with data, often generated computationally, by multiscale, physical models. The problems addressed pose unique challenges in un/semi-supervised learning due to the high dimensionality, the presence of physical invariances and symmetries and the scarcity of data as compared to typical machine learning applications.

The Professorship of Continuum Mechanics is part of the Faculty of Mechanical Engineering at the Technical University of Munich. The research efforts of the group center around the computational modeling of stochastic aspects with particular emphasis in solids/materials. Topics investigated include uncertainty propagation in physical and engineered systems, design and optimization in the presence of uncertainty, Bayesian inverse problems with applications in biomechanics, coarsegraining of atomistic descriptions and model-order reduction. Interested candidates should check on arxiv.org our latest work (our original work on the topic dates back to 2007).

Qualifications:

Candidates should be proficient in scientific computing and probabilistic modeling and should have a Ph.D. by the time of appointment in any Engineering discipline or Applied Mathematics/Statistics or in Machine Learning. Experience in Bayesian modeling is very desirable.

Interested candidates should apply by emailing Prof. P.S. Koutsourelakis by April 30st 2019 at the following address:

contmech@mw.tum.de

and include (in PDF format):

- a CV with the names of up to three references.
- a statement of research experience, interests and goals.
- up to 3 indicative publications/preprints.

Evaluation of applications will start immediately. The contract offered will have a duration of two years. The salary is in accordance with the German public service salary scale (100% TV-L E13). Teaching duties will be in accordance with TUM regulations. TUM is an equal opportunity employer. TUM aims to increase the proportion of women and therefore particularly welcomes applications by women. Applicants with severe disabilities will be given priority consideration given comparable qualifications.

As part of your application for a position at the Technical University of Munich (TUM), you submit personal data. Please note our privacy policy in accordance with Art. 13 General Data Protection Regulation (DSGVO) [go.tum.de/554159](https://www.tum.de/go.tum.de/554159) for the collection and processing of personal data in the context of your application. By submitting your application, you confirm that you have read the privacy notice of TUM.

Professorship of Continuum Mechanics - [contmech.tum.de](https://www.contmech.tum.de)

Faculty of Mechanical Engineering - Technical University of Munich

email: contmech@mw.tum.de

Data Protection Information:

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Kontakt: email: contmech@mw.tum.de