Doctoral Position at the Institute for Mathematics and Computational Simulation (Prof. Popp) as

Research Assistant (m/f/d)
(Salary according to pay grade E13 TVöD)
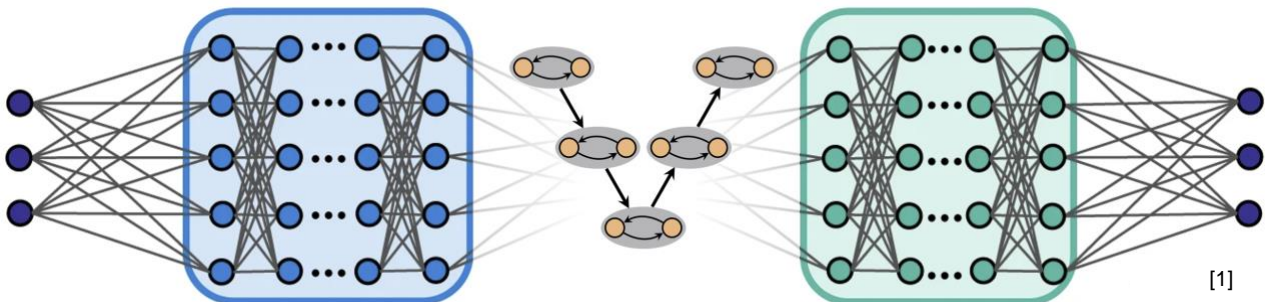
In the following research areas:

Computational Science and Engineering | Machine Learning
Iterative Solvers | Algebraic Multigrid Methods
High-Performance Computing | Optimization

The project

ML4ML – Machine Learning for Multi-Level Solvers

will fuse state-of-the-art technology in machine learning and algebraic multi-level solvers for large, sparse linear systems of equations, e.g., arising from finite element discretizations of coupled multi-physics systems such as fluid-solid interaction. ML4ML will deliver a comprehensive framework to autonomously identify optimal solver parameters at runtime to speed up simulations. By abolishing current limitations in adopting advanced linear solver technology, scientific discovery will be accelerated across disciplines. The research associate will work independently and in close collaboration with the project leaders and institute head, contributing to the realization and further development of the research vision.

[1]

The full-time position (100% E13 TVöD) is initially limited to two years. An extension is possible with the successful acquisition of additional research funding and is actively pursued by the chair. The position is explicitly geared toward qualification for a doctorate (Dr.-Ing.), and this goal is actively supported.

About the Institute

https://www.unibw.de/imcs-en

All details about the research project

https://www.unibw.de/imcs-en/job-opportunities/ml4ml.pdf

Application

Applications will be reviewed as they are received until the position is filled. Please send your complete application documents (PDF file including cover letter, CV, and copies of certificates) **as soon as possible** via email to:

Prof. Dr.-Ing. Alexander Popp
imcs@unibw.de

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[1]: Adapted from Lusch, B., Kutz, J.N. & Brunton, S.L. Deep learning for universal linear embeddings of nonlinear dynamics. Nat Commun **9**, 4950 (2018). Doi: 10.1038/s41467-018-07210-0, licensed under a Creative Commons Attribution 4.0 International License.