To further strengthen our young, internationally oriented research team at the **Institute for Mathematics and Computer-Based Simulation (Prof. Popp)**, we are looking for a

Research Assistant
(remuneration according to remuneration group E 13 TVöD)

in the research area

Computational Contact Mechanics / FEM

Within the scope of his or her work, the employee is expected to work independently on future-oriented research topics, especially a new project funded by the *German Research Foundation (DFG)* on the "Combination of Isogeometric Analysis (IGA), Finite Element Methods (FEM) and Embedded Mesh Coupling for Contact Problems".

The position is initially limited to *three years*, but an extension is possible and is also being sought by the professorship. An orientation towards the qualification goal of obtaining a doctorate (Dr.-Ing.) during the time at the institute is supported and explicitly desired. The workplace will be located in Neubiberg near Munich.

About us

The Institute for Mathematics and Computer-Based Simulation (IMCS) is part of the Faculty of Civil Engineering and Environmental Sciences and offers a unique interdisciplinary environment with bundled competences in the development of numerical methods, solid and structural mechanics, multiphysics modelling and simulation as well as high performance computing (HPC). Our main research and teaching focus lies in the field of computer-based simulation, in particular based on finite element methods (FEM), challenging problems in nonlinear solid and structural mechanics, contact mechanics, fiber-based materials as well as coupled multi-field problems (e.g. fluid-structure interaction).

Our applications range from civil engineering and environmental sciences to aerospace engineering, modern manufacturing technologies (e.g. composite materials), biomechanics and biomedical engineering. In our research projects we cover the entire spectrum from modelling and numerical method / code development to optimization, stochastic methods and uncertainty quantification (UQ). For this purpose, the research group co-develops and co-maintains the software package BACI, one of the world's most powerful FEM research codes with massive parallelization for use on computing clusters / supercomputers (together with research partners at TU Munich). Since 2020, the institute has been operating a new *Data Science and Computing Research Laboratory* at the department, which includes its own and exclusive HPC cluster with more than 500 computing cores, thus providing an excellent technical framework for top international research.

Your profile

- excellent degree in a university engineering course (civil engineering, mechanical engineering, aerospace engineering, electrical engineering) or in applied mathematics, physics or computer science
- very good theoretical skills and profound knowledge in the fundamentals (mechanics, mathematics, etc.), in the field of computational mechanics (FEM, etc.) and in programming (C++, etc.)
- high commitment and motivation for scientific work on a top international level
- a pronounced degree of independence, team spirit and determination
- high creativity and the ambition to "get things done" in a young team
- strong communication and didactic skills in teaching and, more generally speaking, in the supervision of our students

We offer

- high creative freedom in research and teaching
- a pleasant working atmosphere in an excellent young team within a well-equipped environment
- a high level of support and interaction with professors and postdocs
- the opportunity for scientific qualification (doctorate, habilitation)
- a lively international exchange with numerous leading working groups and the best universities worldwide
- optimal future chances for a career in academia or industry
- attractive full-time contracts with competitive renumeration according to the TVöD collective agreement
- a unique living environment in Munich – one of the most attractive cities in the world with unlimited leisure opportunities and a dynamic job market

How to apply

Please send your complete and meaningful application documents in electronic form (as a single PDF file including letter of motivation, curriculum vitae, copies of certificates) as soon as possible, but no later than October 31st, 2020, to

Prof. Dr.-Ing. Alexander Popp
alexander.popp@unibw.de

Institute for Mathematics and Computer-Based Simulation (IMCS)
Faculty of Civil Engineering and Environmental Sciences
University of the Federal Armed Forces Munich
D-85577 Neubiberg / Germany