Chair for Computational Analysis of Technical Systems

RWTH AACHEN UNIVERSITY

Research Assistant (HiWi) Position

for Students of *Computational Engineering Science* or similar study programs

Modern C++ Software Packages for Isogeometric Analysis

Description:

Software tools are important instruments in design and quality insurance of engineering applications. To this end, one very widely used numerical method is the finite element method; a recent extension of which is isogeometric analysis (IGA). In fact, it is IGA that will be the main topic of the currently advertised position. More specifically, we will need support in the implementation of IGA in two modern C++ software packages currently under development at CATS. These software packages, e.g., SplineLib (https://github.com/SplineLib/SplineLib), utilize recent programming concepts, language standards, and software tools.

What we offer:

CATS focuses on research in modeling, simulation, and optimization of technical systems. The working atmosphere at the institute is friendly and productive. Also, we have an open-door policy to foster discussions. We are interested in a long-term employment, but the first period is limited to 3 months, with 8-10 h/week. The salary is set according to the guidelines for students and scientific employees.

Your profile:

You should be familiar with the C++ programming language and Unix systems. Especially experience with meta-programming and other features of the (recent) C++ standards will be needed, but can to some extent also be gained after your start. Knowledge about finite element methods—including IGA—is beneficial but not strictly mandatory.

Application:

If you are interested in contributing to the development of modern C++ software packages for numerical simulations of engineering problems using spline techniques, I would be happy to hear from you. The easiest way to apply is by e-mail. Please include short CV and your most recent transcript.

Contact: Konstantin Key, M.Sc., Schinkelstr. 2, room 424
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