The Institute of Software Methods for Product Virtualization addresses the digital description of an aircraft with all its properties and components based on highly-accurate models covering all disciplines, the whole development process and the entire lifecycle of an aircraft. Prerequisites for this are multidisciplinary simulation methods and process chains / platforms, which are geared to the efficient use of future high-performance computers. The High Performance Computing department works together with other aeronautics institutes of DLR as a center of competence. In order to provide customized solutions to the specific tasks of the different institutes, research on innovative programming models is required as well as their integration. This work finally allows to compare and evaluate the potential of promising approaches to selected problems and to investigate the interoperability of possible combinations.

Among your challenges and tasks are:

- Research on programming models and selection of models for specific applications
- Development of prototypical applications for the selected models
- Development of a test suite for analysis and evaluation of the models
- Use of suitable parallel programming models for simulation software in the field of digital aircraft
- Quality management and documentation of the software
- Perform systematic testing on selected hardware architectures
- Evaluation of results and documentation
- Publication of results at scientific conferences and in renowned journals

Your qualifications:

- Master in computer science or a closely related field
- Good knowledge in parallel programming and HPC
- Good programming skills in C/C++
- Experiences with performance analysis tools would be of advantage
- Knowledge in numerical analysis would be of advantage
- Strong interest in research, enthusiasm, and team spirit
- Good English language skills, basic German language skills desired

Location: Dresden

Starting date: immediately

Duration of Contract: 3 Years

Remuneration: up to German TVöD 13

Type of employment: Full-time (part-time possible)
Your benefits: Look forward to a fulfilling job with an employer who appreciates your commitment and supports your personal and professional development. Our unique infrastructure offers you a working environment in which you have unparalleled scope to develop your creative ideas and accomplish your professional objectives. Our human resources policy puts great value on a healthy work-life balance as well as equal opportunities for men and women. Individuals with disabilities will be given preferential consideration in the event their qualifications are equivalent to those of other candidates.