



The Weierstrass Institute for Applied Analysis and Stochastics (WIAS) is an institute of the Forschungsverbund Berlin e.V. (FVB). The FVB comprises eight non-university research institutes in Berlin which are funded by the federal and state governments. The research institutes belong to the Leibniz Association.

WIAS invites applications for a

PostDoc position (f/m/d)

(Ref. 23/26)

in the Research Group

“Numerical Mathematics and Scientific Computing“

(Head: Prof. Dr. Volker John) **starting January 1, 2024.**

The position is assigned to the research project

„Robust Data-Driven Reduced-Order Models for Cardiovascular Imaging of Turbulent Flows“

as part of the Berlin Mathematics Research Center MATH+.

The goal of the project is to perform research activities in the area of data assimilation methods for fluid flows, optimization, and machine learning

In particular, the project aims at developing robust methods to estimate cardiovascular flow parameters from medical imaging, taking into account the effect of turbulence.

The project is a collaboration between two research groups at WIAS (Numerical Mathematics and Scientific Computing – PI Alfonso Caiazzo, and Data-driven Optimization and Control – PI Jia-Jie Zhu) and the Institute of Computer-assisted Cardiovascular Medicine of the Charité (PI Prof. Dr. Leonid Goubergrits).

We are looking for:

- A highly motivated researcher with a PhD in a field related to computational fluid dynamics, numerical mathematics, or data-driven optimization, with the willingness to engage on innovative and interdisciplinary research questions. The successful candidate will work in close collaboration with project partners.
- We expect the candidate to have a strong background in at least one of these areas: numerical analysis, scientific computing, machine learning, reduced-order models. Experience with scientific object-oriented programming languages (C++, Python, or Julia) is very relevant. Knowledge of cardiovascular imaging is desirable but not required.
- The position does not require knowledge of German languages and international applications are welcomed.

What we offer:

- WIAS Berlin is a premier research institution known for its strength in mathematical modeling, optimization, dynamical systems, and applied mathematics in general.
- Payment according to the collective agreement for the public service (TVöD Bund) including the usual social benefits (30 vacation days in a 5-day week, company pension plan); subsidy for the company ticket for public transport
- Mobile working
- A certified (Audit berufundfamilie) family-friendly work environment.



**Weierstrass Institute for Applied Analysis
and Stochastics
Leibniz Institute in Forschungsverbund Berlin e. V.**



- Berlin offers endless opportunities to enjoy life outside work. Neither the job nor living in Berlin requires German language (although WIAS offers free German courses). We highly welcome international applications. Scientifically, Berlin offers a rich landscape with numerous opportunities for research, as well as job prospects in academia and industry.
- The successful postdoc will receive careful mentorship both from the supervisor and from other peers through a dedicated mentorship program.

Please direct any question to Dr. Alfonso Caiazzo (caiazzo@wias-berlin) or Dr. Jia-Jie Zhu (zhu@wias-berlin.de).

This is a full-time position and is limited to the 31.12.2025. The salary is according to the TVöD scale.

The Weierstraß Institute is an equal opportunity employer. We explicitly encourage female researchers to apply for the offered position. Among equally qualified applicants, disabled candidates will be given preference.

Please upload complete application documents including cover letter, curriculum vitae, and transcripts via our online [job-application facility](#) using the button "[Apply online](#)".

The advertisement is open with immediate effect and will remain open until the position will be filled.

We are looking forward to your application!