



The Weierstrass Institute for Applied Analysis and Stochastics (WIAS) is an institute of the Forschungsverbund Berlin e.V. (FVB). The FVB comprises seven 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

PhD Student Position (f/m/d)

(Ref. 23/14)

in the Research Group

“Nonsmooth Variational Problems and Operator Equations”

(Head: Prof. Dr. M. Hintermüller) **starting as soon as possible.**

The position is tied to project:

“Stochastic gradient methods for almost sure state constraints for optimal control of gas flow under uncertainty”,

a subproject of the collaborative research center *TRR 154: Mathematical Modeling, Simulation and Optimization Using the Example of Gas Networks*. The collaborative research center is an interdisciplinary endeavor between the Weierstrass Institute, Humboldt University of Berlin, Technical University of Berlin, Technical University of Darmstadt, and Friedrich-Alexander University in Erlangen Nuremberg.

The goal of this project is the development of stochastic gradient methods for the treatment of almost sure state constraints. Such constraints arise for example in the nomination validation of gas networks under uncertain demands but also play a role in the transition towards future hydrogen networks. A focus of the project is the consideration of sequences of relaxed problems intertwined with the stochastic gradient method and a rigorous mathematical convergence analysis of the resulting methods.

We are looking for candidates with a master’s degree in mathematics or a closely related field with a strong background in optimization and partial differential equations. Prior knowledge in stochastic optimization, optimal control, or stochastic analysis is beneficial.

Please direct scientific queries to Prof. Dr. M. Hintermueller (Michael.Hintermueller@wias-berlin.de).

The appointment is limited until 30.06.2026. The reduced work schedule is 29.25 hours per week, and the salary is according to the German TVoED Bund scale.

Please upload complete application documents including cover letter, curriculum vitae, photocopies of certificates, and transcripts as soon as possible 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!