



Deutscher Akademischer Austauschdienst  
German Academic Exchange Service

## CALL FOR APPLICATIONS

### Postdoctoral Fellowship in **Discrete Mathematics and Probability**

### At the African Institute for Mathematical Sciences (AIMS) in Rwanda

The German research chair at AIMS Rwanda, Dr. Jan Hązła, in collaboration with Prof. Nicola Kistler at Goethe University in Frankfurt, Germany, is offering a postdoc fellowship at AIMS Rwanda research center in Kigali. The fellowship is made available and funded by the DAAD to promote international academics exchange as well as educational co-operation with developing countries through a variety of funding and scholarship programs.

### Scientific interests

We are looking for excellent candidates with strong interest and background in research in **Discrete Mathematics and Discrete Probability with applied motivations**. The research topics will be mathematical, motivated by various applications like error-correction in data transmission, voting procedures, network processes and understanding machine learning algorithms.

Among others, we are seeking for candidates with a strong interest and background in one of the following areas:

- Combinatorial aspects of abstract algebra.
- Theory of learning, and theoretical and experimental understanding of neural networks.

### Eligibility

- A PhD degree in mathematical sciences (PhD graduation at most 6 years before the start of the fellowship).
- **Strong interest and experience** in the areas indicated above.
- Previous research in at least one of the areas indicated above.
- Familiarity with basic combinatorics and learning theory is a strong plus.
- Excellent coding skills (with emphasis on Python and libraries like keras, python, tensorflow) sufficient to run research-level experiments.
- Familiarity with remote high-performance computing is a strong plus.
- Academic excellence and track record in conducting research.
- Good communication skills in English.

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- Preferably a national of an African country.

Female candidates and candidates from less privileged regions or groups are especially encouraged to apply.

## Scholarship benefits

- The postdoc fellowships will be awarded for one year.
- Monthly scholarships are 1.850 EUR (during stays in Rwanda) and 2.000 EUR (during research stays in Germany).
- Travel costs (if applicable) are covered.
- Health insurance costs are covered.
- Additional benefits are made available for mobility when commencing and finishing the scholarship in Rwanda and for research stays at the Goethe University during the course of the fellowship.
- The position is expected to start on May 1, 2023.

## Fellowship holders

Successful fellows are expected to conduct research in the thematic areas indicated in the section “Scientific interests”. They are expected to publish their results in peer-reviewed journals and conferences, and to be actively engaged in the research activities of the German Research Chair, as well as contribute to the implementation of the cooperation between the Chair and Goethe University in Frankfurt. Fellows are also expected to have some involvement in the AIMS Rwanda academic programs. Fellows will be affiliated with AIMS Rwanda, but they will be encouraged to conduct scientific visits in Germany.

## Application documents

- A short statement of research interests.
- Curriculum Vitae.
- Copy of the PhD certificate.
- Copy of passport or national ID.
- At least two reference letters. Please indicate the names and email addresses of the referees in the application. They will be contacted to submit their confidential references. **The application is not complete without the references.**

The research statement should shortly (1 page) state the candidate’s research interests and plans.

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## Application instructions

Please send completed applications by email to [jan.hazla@aims.ac.rw](mailto:jan.hazla@aims.ac.rw) with subject line containing “DAAD postdoc application”. Applicants should submit the documents in **a single PDF file**. The applications not according to those instructions risk rejection without reading.

## Deadline

The deadline for the applications is **April 7, 2023**.

For questions, please email [jan.hazla@aims.ac.rw](mailto:jan.hazla@aims.ac.rw). **Please see <https://jhazla.github.io> for more details and updates.**

DISCLAIMER: AIMS Rwanda and Goethe university reserve the right to disqualify ineligible, incomplete and/or inappropriate applications. AIMS also reserves the right not to make an appointment to the position as advertised or to extend the deadline for applications. Only successful applicants will be contacted.



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