



Deutscher Akademischer Austauschdienst  
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## CALL FOR APPLICATIONS

### PhD Fellowship in **Partial differential equations and Stochastic analysis**

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

The German research chair, Dr. Mouhamadou Sy at AIMS Senegal, in collaboration with Prof. Martina Hofmanova at Bielefeld University, Germany, is offering PhD fellowships at AIMS Senegal research center in Mbour. These fellowships are made available and funded by the [DAAD](#) to promote international academic 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 in research in **Partial differential equations and Stochastic analysis**. The research topics will be mathematical, motivated by various applications such as in fluid dynamics, turbulence, propagation of waves in nonlinear media, and understanding chaotic behaviors and their applications.

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

- Analysis of partial differential equations
- Stochastic analysis
- Dispersive and nonlinear waves
- Fluid dynamics

### Eligibility

- A Master's degree in mathematical sciences (two-year degree is strongly preferred).
- **Strong interest** in one of the areas indicated above.
- Any experience in the areas indicated above is a plus.
- Good coding skills (eg., Python, Matlab/Mathematica and similar) are a plus.
- Academic excellence.
- Good communication skills in English.
- 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 Ph.D. positions are tenable for 3 years, contingent on satisfactory progress, and could be extended for one more year.
- Monthly scholarships are 1.350 EUR (during stays in Senegal) and 1.200 EUR (during research stays in Germany).
- Tuition fees are covered.

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- 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 Senegal and for research stay at Bielefeld University during the course of the doctoral project.
- The positions are expected to start as soon as practicable, aiming for mid-January 2024.

## 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 Bielefeld University. Fellows are also expected to have some involvement in the AIMS Senegal academic programs. Fellows will be affiliated with AIMS Senegal, but they will be encouraged to conduct scientific visits in Germany.

## Application documents

- Letter of motivation.
- Curriculum Vitae.
- Copies of university degrees (including transcripts).
- Copy of passport or national ID.
- One reference letter. Please indicate the name and email address of the referee in the application. They will be contacted to submit their confidential references. These must be submitted by January 5, 2024. **The application is not complete without the references. The application documents can be submitted in English or in French.**

The letter of motivation should shortly (1 page maximum) and concretely state the candidate's interests and motivations. A detailed research plan is not required.

## Application instructions

Please send completed applications by email to [mouhamadou.sy@aims-senegal.org](mailto:mouhamadou.sy@aims-senegal.org) with subject line containing "DAAD PhD 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 **January 1, 2024**.





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For questions, please email [mouhamadou.sy@aims-senegal.org](mailto:mouhamadou.sy@aims-senegal.org)

**Please see <https://m-sy.org> for more details and updates.**

DISCLAIMER: AIMS Senegal and Bielefeld 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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