

## CALL FOR APPLICATION

### Ph.D. in Partial Differential Equations and Calculus of Variations

At the African Institute for Mathematical Sciences (AIMS) in South Africa in cooperation  
the Technical University Berlin, Germany.

The German Research Chair with specialization in **Partial Differential Equations and Calculus of Variations at AIMS South Africa**, Dr Marc Sedjro, in collaboration with the Communication and Information Theory Chair at TU Berlin, is offering Ph.D. positions at AIMS South Africa research Centre. These fellowships are 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 programmes.

These positions are made available to promote international academics exchange as well as educational co-operation with developing countries. Successful applicants will be directed to register to the Ph.D. program through the University of Cape Town, the University of Western Cape or the Stellenbosch University.

#### **Scientific interests:**

The German Chair's research, at AIMS South Africa, revolves mostly around problems in Fluid Dynamics, games involving a large number of rational agents and optimal transport. The program will introduce Ph.D. students to some interesting and challenging problems such as the *Almost Axisymmetric Flows* arising in Meteorology, *Mean Field Games* and applications of the theory of optimal transport.

#### **Scholarship benefits:**

<b>Tuition fees</b>	Covered
<b>Monthly rate</b>	500 EUR (Monthly)
<b>Annual study and research allowance</b>	920 EUR (Annually)
<b>Allowance for doctoral thesis and printing costs</b>	1,025 EUR as a one-off payment
<b>Additional benefits*</b>	Possibility to do Short term research stays at the TU Berlin and at other AIMS Centres, health insurance

\* Additional benefits are made available for mobility when commencing and finishing the scholarship in South Africa and for research stay at TU Berlin (up to 12 months) during the course of the doctoral project. Furthermore, the expenditure for the local health insurance is eligible for funding.

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**Contact:** For any questions, please email [sedjro@aims.ac.za](mailto:sedjro@aims.ac.za)

**Deadline:** The deadline for the application is **15<sup>th</sup> November 2020**.

**Start of the Scholarship:** As soon as possible

**Duration of the scholarship:** The Ph.D. positions are tenable for 3 years, contingent on satisfactory progress. The scholar could be extended for up to 4 years (provided funds are available)

**Eligibility:**

- A two-year Master degree (doctoral candidates)
- Academic excellence
- Strong interest in Partial Differential Equations and Calculus of Variations.
- Good communication skills in English
- A national of an African country (preferably sub Saharan)

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

**Application documents to submit:**

- Letter of motivation
- Research proposal
- Curriculum Vitae
- Copies of university degrees (including transcripts)
- Copy of passport or national ID
- Two reference letters

Please, **send completed applications to and [sedjro@aims.ac.za](mailto:sedjro@aims.ac.za)**. Applicants should submit the documents in one single PDF file as “familyname\_firstname\_PhD\_2020.pdf” (e.g. for applicant John Doe, the file will be named Doe\_John\_PhD\_2020.pdf). The reference letters should be submitted directly by the reference writers to the emails above.

**For any questions, please email [sedjro@aims.ac.za](mailto:sedjro@aims.ac.za)**

**DISCLAIMER:** AIMS South Africa reserves 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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