AI in Science Postdoctoral Fellowship

Location: Muizenberg, Cape Town, South Africa
Duration: 1 September 2027 to 31 August 2028

The African Institute for Mathematical Sciences in South Africa invites applications for an Artificial Intelligence in Science postdoctoral fellowship.

This one-year appointment at AIMS South Africa is linked to a one year Eric and Wendy Schmidt AI in Science Fellowship at Imperial College, London, which commences on 1 September 2026. The AI in Science Postdoctoral Fellowship at AIMS follows immediately after the Fellowship at Imperial College. **Candidates are required to apply for both appointments**, and the application for the Eric and Wendy Schmidt AI in Science Fellowship can be found on Imperial College's website at: imperial.ac.uk/ix-ai-in-science/apply/.

> The two back-to-back fellowships will provide a postdoctoral researcher a unique platform for innovation and an opportunity to conduct impactful research between the United Kingdom and South Africa.

The AI in Science Postdoctoral Fellow at AIMS South Africa aims to support an excellent researcher and accelerate the Postdoctoral Fellow in using AI to advance and disrupt Science or Engineering.

In Artificial Intelligence in Science, 'AI' is interpreted very broadly, e.g.: topics in Bayesian Inference and Robotics; 'Science' covers any typical topic in Natural Science and Engineering (Epidemiology, Biology and basic science in biomedicine are included but clinical medical themes are not covered, including conventional medical imaging). Examples include Bayesian optimization for molecular or materials design; machine learning for single cell data; physics-based ML for turbine design and astrostatistics. The fellowship is not suitable for generic AI research with general application: candidates must be aiming to substantially advance a particular area of science. Applicants could view themselves as AI researchers tackling particular pieces of science or science researchers using AI to transform their area. Extensive AI knowledge is not required, and AI training is offered.

Duties and Responsibilities

The AI in Science Postdoctoral Fellow will produce independent and original research, using AI to advance science, with a focus on contributing to the research environment in South Africa and sub-Saharan Africa.

The core requirements for the Postdoctoral Fellow are:

- Hold a PhD (or equivalent) in an appropriate discipline by 1 September 2027.
- The potential for leadership qualities in the subject, as illustrated, for example, through showing initiative on research projects.
- An outstanding research record commensurate with their level of experience as demonstrated, for example, through an outstanding thesis, publications, conference presentations, code etc.

- A proposal which is within the AI in Science research remit.

The Postdoctoral Fellow will have the opportunity to supervise one or more student research dissertations for the AI in Science stream for our Master's in Mathematical Sciences students. More information about the AI in Science program at AIMS can be found here: ai.aims.ac.za.

AIMS is a fully residential institute where students live in the same building where they are taught. It is a very immersive pan-African environment. Visiting researchers and lecturers stay at the institute. If they're not having breakfast in a beachfront cafe they could be seen discussing deep ideas with students over breakfast, lunch and dinner. Because of the collaborative nature of the institute, the Postdoctoral Fellow will have the opportunity to integrate deeply into the "life at AIMS".

AIMS is not a degree-granting institution. It was founded as a partnership between three local universities – the University of Cape Town (UCT), Stellenbosch University (SU) and the University of the Western Cape (UWC) – as well as three European universities. The AI in Science Postdoctoral Fellow will be registered as a postdoctoral fellow at one of the three founding universities.

Compensation and Benefits

- Salary: R 550,000
- Flights to and from South Africa
- Meals at AIMS provided

Applying

Because the Fellowship is linked with an Eric and Wendy Schmidt AI in Science Fellowship at Imperial College, applicants should send a subset of documents that they would submit for the Eric and Wendy Schmidt AI in Science Fellowship at Imperial College to vacancies@aims.ac.za.

These are:

1. A full **Curriculum Vitae** including publications.

Additionally, please include an additional single file with:

2. **Publication Elaboration:** a 1 page, or less, note outlining the contribution of up to three papers by the applicant. This should be suitable for a general scientific reader.

3. **Research Proposal Summary:** a 1 page or less, summary of the proposed research suitable for a general scientific audience including the title of the research project. Particular attention will be paid to this summary. It should answer the question of why/how this application of AI will be transformative for the target area of science.

4. **Research Proposal:** a 3 pages or less proposal that explains why and how the proposed research could be transformative for a particular area of science. It can be structured around background, a small number of hypotheses/aims, and work packages. It can be assumed that the reader will first read the

Summary and so content need not be repeated.

5. **Kindness Statement:** a ¼ page or less outline of your view on the need for kindness among scientists. The fellows will join a cohort of fellows in AI for Science with opportunities for outreach and LMIC engagement.

Submitting applications

Applications can be submitted to vacancies@aims.ac.za with email heading "AI in Science Postdoctoral Fellowship".