

Invitation to apply for the NRF PDP Post-Doctoral Scholarships (linked to research at iThemba LABS)

iThemba LABS (www.tlabs.ac.za) is a national facility of the National Research Foundation (NRF) with its main campus close to Somerset West, Western Cape and its satellite campus close to the University of the Witwatersrand in Johannesburg.

The Southern African Institute for Nuclear Technology and Sciences (SAINTS) is a division of iThemba LABS focusing on the provision of education, training and professional development for students and staff linked in the first instance to iThemba LABS.

iThemba LABS uses a variety of particle accelerators to provide accelerated ions and associated detectors systems for use by researchers and students to conduct research in the fields of basic and applied nuclear physics; materials and nanoscience; radiobiology (radiation effects on biological materials); and radiochemistry. Researchers at iThemba LABS are also participating as formal collaborators in the ALICE, ATLAS and ISOLDE experimental programs at the Large Hadron Collider (CERN).

iThemba LABS is in the process of a major upgrade to its accelerators. In particular, it is in the process of developing the South African Isotope Facility (SAIF), which will be based on a new 70 MeV cyclotron that is being built and will start operations in 2023. Because of this development, there are also research opportunities for post-doctoral researchers in Electrical/Electronic/Mechatronic Engineering and Computer Science.

With this call, SAINTS is inviting academically outstanding doctoral graduates to apply for (i) **Postdoctoral Research Fellowships** for the purpose of engaging in a period of dedicated research to do their research; and (ii) **Research Infrastructure Postdoctoral Fellowships** for the purpose of engaging in a period of dedicated research **and** honing their competencies in utilising and managing specialised research infrastructures. Successful candidates will conduct research and development in one of the following fields at iThemba LABS:

- basic nuclear physics (study of nuclear reactions, nuclear structure and nuclear astrophysics);
- research programs at CERN (studies using ALICE, ATLAS, or ISOLDE facilities);
- applied nuclear physics (study of radiation effects on matter, environmental radiation, accelerator mass spectrometry and more);
- materials science (materials characterisation);
- nanoscience (new materials development);
- radiobiology (studying the effects of radiation on the body);
- radiochemistry (development of novel radioisotopes for use in nuclear medicine and more); and
- advanced control systems for accelerator components and detector instrumentation (Engineering, Computer science).

A successful Postdoctoral fellow will be expected to complete and submit to the NRF:

1. An Agreement for Grantholder-linked PDP Fellow Support;
2. A signed three-year fixed-term employment non-renewable contract with the host

- institution;
3. Copy of identity document/passport; and
 4. Proof of completion of the Doctoral degree.

The eligibility criteria for PDP Postdoctoral fellows is as follows:

- Only *bona-fide* South African citizens or permanent residents may receive a PDP Postdoctoral Fellowship;
- Full-time employees of public Research Institutions, Science Councils, Museums or National Facilities may not hold a PDP scholarship or fellowship;
- To be appointed as a PDP Postdoctoral Fellow, the individual must have obtained his/her Doctoral degree no more than five (5) years before commencement of the PDP Postdoctoral Fellowship. In the case of female candidates that are returning after a period of absence from research due to family responsibilities, this criterion may be waived;
- **Postdoctoral Research Fellows** will be individuals that have undergone Doctoral-level training and who undertake research and generate their own research outputs. In addition, they are involved in teaching and in training of postgraduate students; and
- **Research Infrastructure Postdoctoral Fellows** will be individuals that have undergone Doctoral-level training and who undertake research and generate their own research outputs through the utilisation of specialised research infrastructures. In addition, they are involved in teaching, training of postgraduate students and users, establishing new calibration methods and the development, design, and construction of research infrastructures.

To apply:

E-mail the following documents in one PDF file

- your up-to-date CV;
- copy of your full academic record;
- copies of all your degree/diploma certificates to date;
- letter in which you indicate your research field of interest; the department at iThemba LABS where you would like to be based and your proposed mentor in that department; your motivation for pursuing research in this field, and your career goals;
- copy of your research proposal (even if only provisional);
- copy of your ID document/passport;
- two letters of support (one from your current or most recent lecturer/supervisor);

and the following as separate PDF file attachments:

- copies of any research publications/reports you have authored or co-authored,

to saintsadmin@tlabs.ac.za by **31 January 2023**

For further information, contact:

*The SAINTS Office,
iThemba LABS,
+27 (21) 843 1411,
E-mail: saintsadmin@tlabs.ac.za*