



**POSTDOCTORAL FELLOWSHIPS IN OBSERVATIONAL RADIO ASTRONOMY  
AND RADIO ASTRONOMY TECHNIQUES & TECHNOLOGIES**

The Rhodes University Centre for Radio Astronomy Techniques & Technologies ([RATT](#)) is calling for applications for 3-year postdoctoral fellowships in observational radio astronomy and/or radio astronomy techniques and technologies. RATT was established around the eponymous SKA Research Chair at Rhodes held by Prof Oleg Smirnov. In collaboration with the Radio Astronomy Research Group (RARG) of the South African Radio Astronomy Observatory ([SARAO](#), Cape Town, South Africa), RATT conducts research into novel radio astronomy calibration, imaging, data analysis algorithms, software and techniques that are urgently required by the next generation of radio telescopes and by the science they are designed to deliver, with a particular focus on MeerKAT data processing. Most RATT-affiliated researchers are members of the various MeerKAT Large Survey Projects, and are leading and/or are actively involved in the MeerKAT open time proposals from the first two calls. We are leading the science exploitation of the MeerKAT Galaxy Cluster Legacy Survey ([MGCLS](#)), and aim to produce a second data release that requires full calibration of the 115 datasets, along with polarization products for the full set of targets. We are also creating a database containing HI detections in the MGCLS, thereby producing an unprecedented catalogue to allow studies of HI properties in galaxies in all environments, from the field to galaxy clusters, on a statistical basis. Applicants interested in related science and technical goals are encouraged.

We are therefore looking for two types of candidates: observational radio astronomers with experience in data reduction and a strong interest in novel techniques, algorithms and software, or mathematicians and/or signal processing specialists with an interest in developing algorithms and software for radio astronomy. The ideal candidate will have proven software development skills and will be motivated to develop and/or validate new radio data processing algorithms. The candidates will be able to (and will be expected to) spend a significant fraction of their time on their own research projects, with a strong focus on MeerKAT science. Collaboration with other institutions worldwide, and participation in observational programs with leading radio observatories (VLA, LOFAR, E-MERLIN, GMRT, EVN, ALMA, ASKAP, etc.) will be actively encouraged, as will collaboration with other groups at South African universities.

The positions will be based at Rhodes University (Makhanda/Grahamstown) and/or at SARAO (Cape Town). The value of the fellowship will be pegged at the standard SARAO post-doctoral bursary level, and adjusted annually for inflation. The 2022 level is ZAR



422,300 p.a., tax-free. Additional equipment and travel funding will be available as necessary. The term of the appointment is three years.

Expressions of interest and applications should be sent by e-mail to [applications@ratt.center](mailto:applications@ratt.center). The application should consist of a single PDF including a motivation letter, research statement, CV, publication list, and names of 3 references. Screening of candidates will start in December 2021, and will continue until the positions are filled.