



**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 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 (EVLA, LOFAR, E-MERLIN, GMRT, WSRT, ATCA, EVN, ALMA, ASKAP, etc.) will be actively encouraged, as will collaboration with 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 2021 level is ZAR 410,000 p.a., tax-free. Additional equipment and travel funding will be available as necessary. The appointment is for two years, with a one-year extension subject to satisfactory progress.

Suitable candidates may also be offered a joint fellowship with [Heriot-Watt](#) University (Edinburgh, UK) in advanced algorithms for radio astronomy imaging. This fellowship will focus on developing radio imaging algorithms in collaboration with the Biomedical



and Astronomical Signal Processing research group ([BASP](#), Prof Wiaux) at Heriot-Watt. The fellow will be expected to spend extended periods at HWU, and travel funding to support this will be available.

Expressions of interest and applications should be sent by e-mail to Prof Smirnov (o.smirnov@ru.ac.za). The application should consist of a single PDF including a motivation letter, CV, publication list, and names of 3 references. Screening of candidates will start in March 2021, and will continue until the positions are filled.