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BREAKTHROUGH LISTEN

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RATT

Centre for Radio Astronomy Techniques & Technologies (RATT) / Department of Physics & Electronics

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POST-DOCTORAL FELLOWSHIP AT RATT & BREAKTHROUGH LISTEN: Observing Science Using MeerKAT and BLUSE

The Rhodes University Centre for Radio Astronomy Techniques & Technologies (RATT), together with Breakthrough Listen, part of the Breakthrough Initiatives, invites applications for a **postdoctoral fellowship** in **using the BLUSE commensal backend on the MeerKAT radio telescope**.

The postdoctoral fellow will play a key role in using and assisting in upgrades related to and complete scientific observation with the MeerKAT commensal project, the Breakthrough Listen User Supplied Equipment (BLUSE), which enables one of the most comprehensive Search for Extraterrestrial Intelligence (SETI) programs to date through Ethernet-based digital architecture. However, BLUSE can also achieve a host of other scientific objectives. The fellow will leverage our experienced team to increase the scientific capabilities of BLUSE, working closely with a diverse team of researchers at the SETI Institute and Breakthrough Listen, and collaborating with our partners, including Oxford University and the South African Radio Astronomy Observatory (SARAO).

The fellow will have access to science-ready data products from BLUSE and the flexibility to design new processing pipelines to feed into the real-time system. Time will be available for independent research, preferably in the areas of SETI, astrobiology, radio transients, radio frequency interference, or ionospheric science. The fellow has the unique opportunity to become an expert radio astronomer and will also have opportunities to use the Allen Telescope Array, which can be of great benefit to their own research.

The ideal candidate will have a PhD in radio astronomy, a solid grounding in radio astronomy techniques, experience with data from MeerKAT and/or other radio observatories, a track record of collaboration within the African radio astronomy community, established coding skills, and familiarity with scientific computing and observatory software. Knowledge of radio observatory science operations would be an advantage. The candidate must be able to work effectively both independently and as part of an interdisciplinary research team.

The post-doctoral fellowship could be hosted at Rhodes University or SARAO's Cape Town offices.

The value of the fellowship is fixed at the standard SARAO post-doctoral bursary level, which (as of 2026) is ZAR R478,826, tax-free, and adjusted for inflation annually. Additional equipment and travel funding will be available. The appointment is for two years, with a one-year extension subject to satisfactory progress.

Interested candidates should submit their CV, bibliography, and a research statement, and request that three letters of recommendation be sent separately by **30 June 2026**. Applications will start to be considered from that date until the position is filled. Inquiries, applications and letters of recommendation should be sent to

applications@ratt.center.

For further information on Breakthrough Listen, RATT and SARAO, see https://breakthroughinitiatives.org/initiative/1, https://ratt.center and https://sarao.ac.za.