



UNIVERSITY OF
KWAZULU-NATAL
INYUVESI
YAKWAZULU-NATALI



SARAO
South African Radio
Astronomy Observatory

Postdoctoral Fellowship in Cosmology and Radio astronomy at UKZN
Deadline: 31st July 2022

The research group led by Professor Yin-Zhe Ma at the Astrophysics Research Centre at the University of KwaZulu-Natal invites applications for two postdoctoral research fellows in cosmology and radio astronomy. These two positions have different tasks and tenure periods, as described below.

1. One position [Ref. UKZN-LSST-2022] will work on preparing science for Vera C. Rubin Observatory (LSST), with particular emphasis on cross-correlating photometric data products from LSST with 21-cm survey data from MeerKAT. The research involves developing an analysis method and pipeline for large-scale structure cross-correlation and 21-cm cosmology. This position is funded by the College of Agriculture, Engineering and Science of UKZN and will last for two years, starting immediately after offering and acceptance.
2. Another position [Ref. UKZN-HERA-2023] will work on low-frequency interferometer calibration and heavily involve in Hydrogen Epoch Reionization Array (HERA). The candidate will also work on high-redshift EoR power spectrum and cross-correlation technique. This position is funded by SA Radio Astronomy Observatory (SARAO) and will last for three years, starting from 2023.

The minimal qualification is Ph.D. in astronomy, astrophysics, computational physics or a related field completed or expected by the effective date. Significant computational skills, parallel programming and data analysis skills are preferred. Preference will be given to the candidate who fit into the demographic guidelines provided by the NRF and SARAO.

DEADLINE: 31st July 2022 (full consideration), although the late application is also accepted until the position is filled.

INQUIRY: Please address the query to Professor Yin-Zhe Ma (ma@ukzn.ac.za).

SUBMISSION: Please submit your CV with a complete publication list, qualification documents, a brief research statement, and minimum 2 reference letters to ma@ukzn.ac.za, with the email title quoting the specific reference of the position you are applying to.