

The University of KwaZulu-Natal (UKZN) is committed to meeting the objectives of Employment Equity to improve representivity within the Institution. Preference will be given to applicants from designated groups in accordance with our Employment Equity Plan.

**COLLEGE OF AGRICULTURE, ENGINEERING AND SCIENCE**

**POSTDOCTORAL FELLOWSHIP (RUBIN/LSST SOUTH AFRICA)  
01 MARCH 2022 – 28 FEBRUARY 2025 (3 YEARS FIXED TERM)  
ASTROPHYSICS RESEARCH CENTRE  
SCHOOL OF MATHEMATICS, STATISTICS AND COMPUTER SCIENCE  
WESTVILLE CAMPUS**

**REFERENCE NO.: MSCS-LSST/2021**

In support of South Africa's in-kind contribution to the Vera C. Rubin Observatory Legacy Survey of Space and Time (LSST), we invite applications for a postdoctoral fellowship to be held at the Astrophysics Research Centre (ARC), University of KwaZulu-Natal (UKZN). The fellowship is funded by the National Research Foundation, and administered in partnership with the South African Astronomical Observatory.

The incumbent will work with Professor Matt Hilton on producing and integrating high-level data products derived from public MeerKAT data into the Rubin Science Platform, in support of the activities of the LSST Galaxies Science Collaboration. They will spend 50% of their time working on this project, and will have LSST data rights for at least the duration of the fellowship. They will be free to spend the other 50% of their time working on research topics of their choice, although applicants with interests related to LSST and/or those of the UKZN extragalactic astrophysics group are strongly preferred. Researchers in ARC at UKZN participate in the Atacama Cosmology Telescope, Simons Observatory, XMM Cluster Survey, and various MeerKAT survey projects, with a focus on galaxy clusters. UKZN is also the lead institution in the Hydrogen Intensity and Real-time Analysis Experiment (HIRAX).

**Minimum Requirements:**

- PhD in astrophysics
- Strong computational and technical skills (Linux/UNIX, software development with Python, version control using git and GitHub, writing documentation - as evidenced by, e.g., contributions to astrophysics software packages available under open-source licenses)
- Experience of processing and analysis of radio/optical/IR or other relevant multi-wavelength data
- Research interests in extragalactic astrophysics (ideally galaxy clusters and/or AGN, with applications that will be able to exploit a serendipitous survey constructed using public MeerKAT data)

Enquiries regarding the post may be directed to Prof. Matt Hilton ([hiltonm@ukzn.ac.za](mailto:hiltonm@ukzn.ac.za))

The postdoctoral fellowship is for 3 years (subject to annual progress reviews by the South African Rubin Observatory/LSST Program) and if possible will be taken up before March 2022. The salary is R410,000 per year, and an annual travel and equipment grant is provided.

The closing date for receipt of applications is 3 January 2022.

Applicants are required to submit the following:

- (i) a cover letter highlighting their experience in meeting each of the minimum requirements as listed above, and outlining their relevant research experience and interests (max: 3 pages)
- (ii) a CV including publications list
- (iii) contact details for two referees

Applications must be emailed directly to Prof. Matt Hilton ([hiltonm@ukzn.ac.za](mailto:hiltonm@ukzn.ac.za)) before the closing date. The subject line must clearly indicate the reference no. MSCS-LSST/2021. Late applications will not be considered. Successful individuals will be contacted on or before 7 January 2022 to make arrangements for an online interview. Applicants should be within 5 years from the date of PhD at the start of the position and may not have held a full-time permanent academic or professional post. The appointment is subject to the rules and approval of the University of KwaZulu-Natal and the National Research Foundation of South Africa.