TWO POSTDOCTORAL POSITIONS AT University of Cape Town and the South African Astronomical Observatory associated with the Inter-University Institute for Data Intensive Astronomy (IDIA)

Hosts: Paul Groot, Patrick Woudt

ADVERT

Postdoctoral Research Fellows: Optical - Radio Transients and Variables
The Transient and Variables Groups at the University of Cape Town and the South African Astronomical Observatory are seeking two Postdoctoral Researchers associated with IDIA, to join a project focused on transient phenomena and their host binary settings using optical and radio observations, primarily obtained through the MeerKAT radio telescopes, the MeerLICHT & BlackGEM optical telescopes and further resources at SAAO/SALT.

The Project:
This multi-wavelength study leverages time-resolved observations on the MeerKAT radio array, the MeerLICHT and BlackGEM optical telescopes and additional facilities to address the physics and evolutionary impact of transient phenomena in a stellar binary setting.
Work can concentrate on:

- Multi-wavelength studies of (ultra)compact binaries, including gravitational wave sources as well as white dwarf pulsar systems
- Mutli-wavelength studies of low-luminosity transients in nearby galaxies, in particular underluminous (thermonuclear) supernovae
- Fast synoptic surveys in both the optical and the radio to expand horizons in the time-domain regime, including MeerKAT high time resolution studies, as well as optical CMOS-based wide-field studies breaking the 1 Hz barrier.
- Data processing and data analysis techniques in both optical and radio to handle large scale, high cadence surveys, as facilitated by the Inter-University Institute for Data Intensive Astronomy (IDIA), a multi-university collaboration in research cloud computing based at UCT.

Requirements:

- Expertise in (multi-wavelength) astronomy focused on stellar variables and transients.
- Background in large data sets and information extraction using machine learning techniques.
- Experience with radio and/or optical astronomy data analysis.
- (Not mandatory, but desired) Experience with (co-)supervision of students/teaching assistant roles
- The candidate should not have obtained the PhD more that 5 years before the date of appointment.

The positions are for 2 years, funded by the National Research Foundation, with a possibility for an extension depending on available funding.

Application:
Please send the following documents to paul.groot@uct.ac.za and patrick.woudt@uct.ac.za by March 1, 2026:

- Complete CV and list of publications.
- Motivation letter with a short research statement (max 3 pages).
- 2 names of references
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Selection will commence on March 1, 2026 and will continue until the position is filled. The position can start directly after selection.

For further information please contact Paul Groot (paul.groot@uct.ac.za) or Patrick Woudt (patrick.woudt@uct.ac.za).