

Postdoctoral positions in Cosmology with the SKA

The Astrophysics Group at the University of the Western Cape, invites applications for two postdoctoral positions in cosmology. The group has grown dramatically in recent years, with 6 faculty members, 17 postdocs and 14 postgrad students. The group is deeply involved in work related to the Square Kilometre Array (SKA). In particular it is leading the international SKA Cosmology Science Working Group and has members involved in almost all other working groups. South Africa will be hosting SKA1-MID, the largest array of dishes in the world, to be completed by 2023, with the pathfinder MeerKAT already under construction (see e.g. <http://ska.ac.za/releases/20150119.php>).

We encourage the applications from strong candidates with experience in observational or theoretical cosmology, or in radio astronomy, large-scale simulations or statistical analysis of data. The scientific focus will be in one or more of the following areas:

- Cosmology with the SKA and its pathfinders, in particular MeerKAT (both with continuum galaxy surveys and HI intensity mapping).
- The 21cm signal from the epoch of reionization. This includes both theory/simulations as well as data analysis with the upcoming HERA experiment to be set in South Africa and the future SKA-LOW.
- Development of statistical methods to probe the radio galaxy population below the noise (both with current and future experiments).

The selected candidates will work with Prof. Mario Santos on the themes above but will also be encouraged to collaborate with other staff members, in particular Professors Roy Maartens, Romeel Dave, Matt Jarvis and Russ Taylor (see <http://www.uwcastro.org>). The group also has strong links with other institutions in Cape Town, such as the SKA office, SAAO and ACGC-University of Cape Town (all within 20 minutes from the University).

Applicants must hold a PhD by the anticipated start date and should have obtained the degree less than five years ago. The appointment will be for 3 years with a nominal start date of September 2015, although other start dates can be negotiated. Applications consisting of a CV, publications list and a statement of research interests, should be emailed to Prof. Mario Santos (mariogrs@gmail.com). Applicants should arrange for a minimum of two letters of recommendation to be sent the same way. Applications received by April 20, 2015 will receive full consideration, although later applications may be considered. Informal enquiries are welcomed and should be directed to the same email.

Included Benefits: Salary for 2015 is ZAR 327,000 per year, tax free, plus travel and equipment grants.