



Postdoctoral Fellowship in the High Energy Physics, Cosmology & Astrophysics Theory (HEPCAT) group at the University of Cape Town (UCT)

The High Energy Physics, Cosmology & Astrophysics Theory (HEPCAT) group in the Department of Mathematics and Applied Mathematics at the University of Cape Town (UCT) invites applications for two postdoctoral fellowships starting in 2021. The HEPCAT group was established around the South African Research Chair in Physical Cosmology held by Amanda Weltman. Group members conduct research on a wide range of theoretical physics, cosmology and astrophysics problems, with a particular focus on connecting observation and theory.

For more information on the activities of the HEPCAT group, see <http://hepcat.group/>. Our faculty members include Shajid Haque, Julien Larena, Jeff Murugan, Jonathan Shock and Amanda Weltman. There are additional opportunities to perform joint work across all group research areas, including amplitudes in astrophysics, machine learning and theoretical cosmology more broadly. There will also be opportunities to join external collaborations, including work on MeerKAT, IAXO and the HIRAX experiment. We will consider candidates with a range of interests related to cosmology, gravity and high energy theory, with an emphasis on research within Fast Radio Burst cosmology/astrophysics, intensity mapping, multi-messenger astrophysics, effective field theory and using Machine Learning techniques in physics and astrophysics. Applicants must have a track record of accomplishment and independence in their research

The appointment must comply with the University's approved policies, procedures and practices for the postdoctoral sector, and is subject to the rules and approval of the University of Cape Town and the National Research Foundation of South Africa.

The appointment is for two years at the outset, with a possible extension of one year subject to satisfactory progress. A PhD in Physics, Applied Mathematics or Astronomy is required. Postdoctoral experience is a bonus, however the candidate needs to 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.

Cape Town is an extremely beautiful city, surrounded by natural beauty. With beaches, mountains and forests only a short way from the city centre, Cape Town offers a perfectly balanced lifestyle. The city offers a wonderfully cosmopolitan atmosphere at a relatively low cost of living. The postdoc funding level is R400 000 per annum, tax free. Additional support is available for equipment and travel funding as appropriate.

Interested candidates should send a CV, a research proposal (2-3 pages), and arrange for three letters of recommendation to be sent to melissa.largier@uct.ac.za. Please use the following format in the subject line: YOURNAME, Postdoc 2021. Screening of candidates will start in April 2021 and will continue until the positions are filled. Any queries can be sent to Melissa at melissa.largier@uct.ac.za.

The University of Cape Town reserves the right to:

- *disqualify ineligible, incomplete and/or inappropriate applications*
- *change the conditions of award or to make no awards at all*