



Centro de Investigación, Tecnología, Educación y Vinculación Astronómica
UNIVERSIDAD DE ANTOFAGASTA

Announcement of one open postdoctoral position

The Centro de Astronomía (CITEVA) within the Universidad de Antofagasta, in Chile, is seeking to recruit an enthusiastic Postdoctoral Research Fellow to carry out a 24-month research project, focussing on applying astronomical techniques to characterise space and ground based light pollution sources. Given the nature of the project, the postdoc will have flexibility to pursue their own scientific programmes in a traditional astronomical field. Applicants with experience researching exoplanets are particularly encouraged to apply but candidates with a good track record of research in any field will be given full consideration. It is anticipated that the position will begin in May 2021, but this is negotiable.

The postdoc will work with Dr. Eduardo Unda-Sanzana (Universidad de Antofagasta) and Dr. Jeremy Tregloan-Reed (Universidad de Atacama) to study light pollution sources, both on the ground and on the sky, by means of efficient technological innovations and the application of astronomical source detection and characterization techniques, in order to support an evidence-based handling of these problems by the relevant regulatory bodies. The project is split into two research lines:

1. To develop a light pollution map of urban areas in Antofagasta by means of an unmanned aerial vehicle (UAV), using astronomical photometric techniques to discriminate sources.
2. By using the 0.6m Chakana telescope at Universidad de Antofagasta's Ckoirama observatory in northern Chile, quantify the effect of Low Earth Orbit satellites (LEOsats) on professional astronomical observations.

The results from both research lines will be used to support the development and application of evidence-based, national and international regulations about light pollution. The postdoc will play an important role in an active international collaboration with experienced members from some of the premier observatories worldwide, working towards protecting the conditions in which some key astronomical surveys will take place in the next few years.

We welcome applicants with expertise in either photometric data calibration, processing and analysis, and/or experience performing photometric observations. UAV piloting experience is desirable but additional funds are provided for UAV training and an operational licence. The applicant must be in possession of a Ph.D. degree in astrophysics or physics by the application deadline: candidates who have not received their doctorate before the deadline will not be admitted to the selection process. Successful applicants will have the chance to apply for the 10% of time guaranteed to Chilean institutions on all international observatories based in the country (ESO/Paranal, ALMA, APEX, CTA-South, Las Campanas, ESO/La Silla, LSST, CTIO, Gemini, etc.). To support their research, the successful applicant will also have access to major surveys in which CITEVA is involved, such as SDSS-V, LSST, VVV, VISIONS, Gaia, MINDSTEP, ALPINE, VESTIGE, PHAT, and SIGNALS.

Complete applications must include in a single PDF file: a CV with a list of publications, cover letter (1 page), a research statement (max 2 pages), and future research plans (max 2 pages) and the names



Centro de Investigación, Tecnología, Educación y Vinculación Astronómica
UNIVERSIDAD DE ANTOFAGASTA

and contact details of three (3) references aware of the candidate's work experience. All documents should be sent by email to Dr. Eduardo Unda-Sanzana at eduardo.unda@uantof.cl by the deadline April 1st 2020. However, the position will remain open until filled.

CITEVA is based in Antofagasta, a large and rapidly expanding coastal city in Northern Chile, on the edge of the spectacular Atacama desert, where ALMA and VLT are located, and where the E-ELT is being built. CITEVA has a very active and mutually supportive community of researchers, professionals and students, with a strong commitment to the development of the Antofagasta region. General information about CITEVA can be found at www.astro.uantof.cl. General inquiries are welcome and can be directed to the Director of CITEVA astro.director@uantof.cl.

The University of Antofagasta is an equal opportunity employer dedicated to excellence through diversity and does not discriminate on the basis of age, race, sex, disability, sexual orientation, national origin, religion, marital status, gender identity or any other non-job related criteria. The University of Antofagasta recognises the importance of a multicultural community of students, faculty, and staff who seek to advance our commitment to diversity. The University invites applications from underrepresented groups and those who have academic experiences with diverse populations.