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Ma-Re / CSIR-SOCCO

Postdoctoral Fellowship in Earth System Model Learning and Training Centre (ESM-LTC)

Preamble

The training of young scientists is a major concern for the development of Earth System Science in South Africa. The Marine Research Institute (Ma-Re) at the University of Cape Town and the CSIR Southern Ocean Carbon – Climate Observatory (SOCCO) are seeking to develop a motivated, early-career scientist to run a joint learning centre with dedicated on-line resources for ESM analysis and validation.

About the Fellowship

This post and the Centre will be supported by the NRF project SOCCESM, funded by the National Research Foundation for the 3-year period 2019 to 2021. Its aims are to improve our understanding of the role of the Southern Ocean in the global carbon – climate feedbacks as well as the role of teleconnections from Antarctica and the high latitude Southern Ocean in influencing climate variability and change over southern Africa. Towards achieving these aims, the project will develop new and innovative parameterisations of sub-mesoscale and mesoscale circulation in the Southern Ocean and of Antarctic sea-ice dynamics, towards improving Earth System Model (ESM) projections of Southern Hemisphere climate change. More specifically, these parameterisations will be built in an African-based Earth System Model that is to participate in the Coupled Model Inter-comparison Project (CMIP6) of the World Climate Research Programme (CMIP6) during the project period (2019-2021) and beyond.

The project is a joint endeavour between the Global Change Institute (GCI) of the University of the Witwatersrand (Wits), the Southern Ocean Carbon – Climate Observatory (SOCCO) of the Council for Scientific and Industrial Research (CSIR), the Marine Research Institute at the University of Cape Town (UCT) and the University of Venda (UniVen).

The Fellow will take advantage of existing on-line resources on ESM and will develop videos, online tutorials and necessary tools for the education and training in model

validation and analysis for atmospheric, oceanic and biogeochemical properties in the Earth System. The Fellow will also establish a helpdesk for all the students participating in the project. In terms of research, the Fellow will contribute towards strengthening the links between the project and the MIP communities by ensuring coherence in model experiment design relevant to each MIP.

Eligibility

The Fellowship is open to any eligible person, preferably South African, who can carry out its objective. Possession of a PhD degree which has been obtained no more than five years ago is a minimum requirement. Eligible candidates may not have held any academic or permanent professional positions since achieving the PhD. The research to be conducted by the Fellow will be under the general supervision of the Departmental Supervisor at the University of Cape Town and the Fellow will be registered in the Department of Oceanography at UCT.

As part of the Fellow's professional development, the successful candidate will be required to participate in limited teaching and co-supervision of MSc and PhD students.

The required entry skills are: PhD in ocean, atmospheric sciences or a related discipline; experience in Bash, Python and any compiled language programming.

Value and Tenure

The value of the Fellowship award is from R300 000 per annum, depending on research experience. Postdoctoral Research Fellowships are non-taxable, meaning that Fellowships must be granted without fringe benefits and no services are required of the successful candidate in return for the Fellowship beyond the agreed research activity.

The Fellowship is offered for two years + one year depending on the availability of funds and the Fellow's performance.

Conditions of Award

- i. The postdoctoral research fellowship is available only to individuals who have achieved the doctoral degree within the past 5 years
- ii. Applicants may not previously (since achieving the PhD) have held full-time professional or academic positions
- iii. No services beyond the scope of the research fellowship are required in return for the Postdoctoral Fellowship award
- iv. No benefits or travel allowances are included in the value of the fellowship
- v. The successful incumbent must comply with the University's approved policies, procedures and practices for the postdoctoral sector.

Applications

To apply, send an email application to the Director of Ma-Re at the University of Cape Town, Associate Professor Marcello Vichi (Marcello.Vichi@uct.ac.za) and attach:

- letter of application describing research experience, interests, and collaborative experience
- a curriculum vitae and list of publications
- certified transcripts of academic qualifications at tertiary level
- contact information for two (2) scientific referees.

Applications will stay open until the position is filled. However, it is anticipated that the Fellowship will commence by October 2019.

Applicants will be considered by a sub-committee within the Marine Research Institute.

The University of Cape Town reserves the right to disqualify ineligible, incomplete and/or inappropriate applications.

The University of Cape Town reserves the right to change the conditions of award or to make no awards at all.