

OPPORTUNITIES FOR POST-DOCTORAL FELLOWSHIPS AT THE CENTRE FOR SUSTAINABLE OCEANS (CSO), CAPE PENINSULA UNIVERSITY OF TECHNOLOGY (CPUT)

Background

The Centre for Sustainable Oceans (CSO) at CPUT is a leading Centre contributing to ocean sustainability. Focusing on plastics research, the Centre focuses on the advancement of knowledge and information bases, skills, and technologies aligned to CPUT's Research Focus Areas (RFA), particularly on RFA 1: Bio-economy and Biotechnology and RFA 4: The Environment, Climate Change and Sustainability.

Focusing on plastics, the Centre research focuses on 3 Themes: 1) Changes in oceans arising from ocean economy sectors, 2) Decision-making in Ocean Governance and 3) Emergent and New Ocean Science Technologies – the development of capacity and skills by CPUT.

The CSO is currently investigating the efficacy, opportunities and challenges of the practical implementation of the 'plastics problem'. The Centre has a well-funded one-year opportunity for two post-doctoral research fellows, with the opportunity for renewal of one of these for another year.

Post-Doctoral Fellowship 1 – Biological Effects and Toxicology of Microplastics

Microplastics are plastic particles smaller than 5 mm that poses potential biologic and toxicological risks that may further affect ecosystems and human health. This fellowship aims to advance our understanding of how microplastics impact biological systems and contribute to environmental and human health risks in South Africa. The successful candidate will join a dynamic research team dedicated to pioneering studies in this critical area.

The Centre for Sustainable Oceans, in collaboration with the Applied Microbial and Health Biotechnology Institute (AMHBI) at the Cape Peninsula University of Technology, invites qualified individuals to apply for a one-year post-doctoral fellow position concentrating on microplastic ecotoxicology.

Minimum requirements:

- PhD in Marine Science, Environmental Science, Toxicology, Biology, Chemistry, Biochemistry or a related field with a strong experience in conducting laboratory and/or field research related to environmental toxicology, ecotoxicology, or related disciplines.
- The PhD must have been awarded within the last five years.
- Proficiency in standard laboratory techniques and methodologies used in toxicology and environmental science.
- Fluency in English with excellent written and verbal communication skills.

Advantageous competencies and expertise:

- Plastics-related research experience
- In-depth understanding of microplastic pollution, including sources, distribution, and environmental fate.

- Experience in interdisciplinary research projects that integrate toxicology, ecology, environmental chemistry and biochemistry.
- Experience with advanced analytical techniques such as spectrometry and models for toxicology protocols (eg. zebrafish).
- Ability to collaborate with researchers from diverse scientific backgrounds.
- Experience in writing research proposals and securing funding from national and international funding agencies.
- Ability to supervise research assistants and contribute to the academic development of junior researchers.
- Strongly motivated and independent work ethic.

Responsibilities

- A minimum of two (2) DHET accredited research outputs for CPUT per annum
- Perform analytical work related to the research project of the CSO
- Data analyses and field work
- Initiate and source research funding
- Assist with postgraduate supervision
- Assist with coordinating research projects in the CSO

Fellowship Details

The fellowship offers a competitive stipend of R320,000 per annum (tax-free). The initial tenure is one year, with the possibility of renewal based on performance and funding availability. Fellows will be affiliated with the Cape Peninsula University of Technology's Centre for Sustainable Oceans (CSO) based at the Bellville Campus.

Research output and supervision of post-graduate students is considered an important aspect of this position. Interested applicants are required to please forward their 1) Curriculum Vitae, 2) a letter of motivation, 3) research proposal/concept note, 4) certified copy of highest qualification, 5) certified copy of ID/Passport and (if applicable) 6) a valid South African Quality Assurance (SAQA) certificate for the qualification if not obtained in South Africa to Dr Conrad Sparks, acting CPUT Research Chair: Oceans Economy at [sparksc\(at\)cput.ac.za](mailto:sparksc(at)cput.ac.za). Deadline: the position is open until it is filled. Interested parties are also encouraged to email the CSO at [cso\(at\)cput.ac.za](mailto:cso(at)cput.ac.za) if they require further clarification on this position.

Post-Doctoral Fellowship 2 – Ocean Accounting: Coastal Plastic Distribution, Impacts, and Risks

Plastic pollution is a pervasive issue affecting marine ecosystems worldwide. The impacts of plastic debris are severe, posing threats to marine organisms and habitats, and incurring significant economic costs. The proposed fellowship aims to advance the understanding and management of plastic pollution in coastal and marine environments of South Africa through innovative research and comprehensive ocean accounting methodologies.

This fellowship will contribute to the development of effective solutions to tackle plastic marine debris by integrating environmental, social, and economic data within standardized ocean accounting frameworks. Ocean and coastal earth observation (EO) and remote sensed applications are of particular importance in such spatial interpretation including using high resolution and multispectral satellite imagery and aerial photography imagery derived through both aircraft and UAV surveys. A thorough understanding of, and use of GIS applications are imperative within such spatial analyses and interpretation.

The Centre for Sustainable Oceans at the Cape Peninsula University of Technology invites qualified individuals to apply for a one-year post-doctoral fellowship in Ocean Accounting: Coastal Plastic Distribution, Impacts, and Risks.

Minimum requirements:

- PhD in ocean sciences, geographic, environmental sciences or geography, or a related field
- The PhD must have been awarded within the last five years
- Experience with ocean spatial analyses, Geographic Information Systems (GIS) and remote sensing analyses and applications.
- Fluency in English with excellent written and verbal communication skills.

Advantageous competencies and expertise:

- Demonstrated experience in ocean spatial analyses, Geographic Information Systems (GIS), and remote sensing applications
- Proficiency in GIS applications and remote sensing methodologies, including image classification and ground truthing
- Understanding and interest in ocean management and governance.
- Ability to collaborate with researchers from diverse scientific backgrounds.
- Experience in writing research proposals and securing funding from national and international funding agencies.
- Ability to supervise research assistants and contribute to the academic development of junior researchers.
- Strongly motivated and independent work ethic.

Responsibilities

- A minimum of two (2) DHET accredited research outputs for CPUT per annum
- Perform analytical work related to the research project of the CSO
- Data analyses and field work
- Initiate and source research funding
- Assist with postgraduate supervision
- Assist with coordinating research projects in the CSO

Fellowship Details

The fellowship offers a competitive stipend of R320,000 per annum (tax-free). The initial tenure is one year, with the possibility of renewal based on performance and funding availability. Fellows will be affiliated with the Cape Peninsula University of Technology's Centre for Sustainable Oceans (CSO) based at the D6 campus.

Research output and supervision of post-graduate students is considered an important aspect of this position. Interested applicants are required to please forward their 1) Curriculum Vitae, 2) a letter of motivation, 3) research proposal/concept note, 4) certified copy of highest qualification, 5) certified copy of ID/Passport and (if applicable) 6) a valid South African Quality Assurance (SAQA) certificate for the qualification if not obtained in South Africa to Dr Conrad Sparks, acting CPUT Research Chair: Oceans Economy at [sparksc\(at\)cput.ac.za](mailto:sparksc(at)cput.ac.za). Deadline: the position is open until it is filled. Interested parties are also encouraged to email the CSO at [cso\(at\)cput.ac.za](mailto:cso(at)cput.ac.za) if they require further clarification on this position.