



JUNIOR RESEARCH FELLOW (2-year contract)

Minerals to Metals, Department of Chemical Engineering

Engineering & Built Environment Faculty

Minerals to Metals in the Department of Chemical Engineering at the University of Cape Town has a vacancy for a Junior Research Fellow for two years for research in the areas of impacts of, and metal recovery from, mineral and consumer waste materials. We invite applications from suitable candidates for this fixed two-year contract post available from 1st of February 2024 or at the earliest date thereafter.

Minerals to Metals (MtM) was established as a UCT Signature Theme in 2007, to develop interdisciplinary research and education capacity with a focus on addressing the sustainability challenges facing the minerals sector. In line with its interdisciplinary focus, MtM undertakes collaborative research across a number of research groupings both within, and external to, the University of Cape Town. One key focus of MtM is exploration of routes for the processing of secondary mineral and metallic resources (low-grade ores, tailings and various post-consumer waste products) using predominantly hydrometallurgical processes under the leadership of Prof Jochen Petersen. MtM is also host of the Mine Dust and Health Network, under the leadership of Associate Professor Jennifer Broadhurst, which brings together researchers, stakeholders and practitioners from a variety of disciplines and professional backgrounds to identify sources, challenges and mitigation opportunities associated with dust generated through the extraction, processing and transport of mineral resources.

The successful candidate will work in both focus areas, helping with the design and coordination of the respective research programs and supervision of postgraduate students. They will also play a key role in coordinating the communication of MtM activities to its members and collaborators nationally and internationally.

Requirements for the job:

- A PhD in engineering sciences or chemistry.
- A minimum of 2 years of research experience outside of their PhD studies, in the field of minerals processing, extractive metallurgy or solid waste management.
- Evidence of good qualitative and quantitative research skills.
- Evidence of strong academic writing ability, through publications in scientific journals.
- Advanced knowledge of working with spreadsheets on Excel.
- Knowledge of the fundamental principles of hydrometallurgy.

The following would be advantageous:

- Experience with supervision of postgraduate students at the Honours and Masters level
- An understanding of the mining industry in an African context, for example through work experience in an actual mining operation

Responsibilities:

- Plan for and undertake relevant research related to both research areas.
- Publish research outputs in accredited journals and scholarly books.
- Present research findings at seminars and conferences at local, national and/or international events.
- Interface effectively with relevant researchers, both internationally and locally.
- Assist in the identification of research funding opportunities and co-author research grant applications.
- Supervise 4th year engineering and co-supervise post-graduate research projects.
- Assist with the organisation and running of various activities of Minerals to Metals.

The annual cost of employment, including benefits (*where applicable*), is in the range of R 544 062 - 753 904

To apply, please e-mail the below documents in a **single pdf file** to Prof Jochen Petersen at Jochen.Petersen@uct.ac.za.

- UCT Application Form (download at <http://forms.uct.ac.za/hr201.doc>)
- Cover letter, and
- Curriculum Vitae (CV)

Please ensure the title and reference number are indicated in the subject line.

An application which does not comply with the above requirements will be regarded as incomplete. Only shortlisted candidates will be contacted and may be required to undergo a competency test.

Telephone: 021 650 2518

Website: www.mtm.uct.ac.za

Reference number: MtM/JRF/2023

Closing date: 12 January 2024

UCT is committed to the pursuit of excellence, diversity and redress in achieving its equity targets. Our Employment Equity Policy is available at <http://www.uct.ac.za/downloads/uct.ac.za/about/policies/eepolicy.pdf>

UCT reserves the right not to appoint.