# Post-Doctoral Fellow Position(2) Extractive Metallurgy

15 Nov 2018
Department of Process Engineering
Stellenbosch University ·South Africa

**Job description:** The Department of Process Engineering has expanded its capabilities in research related to electronic waste recycling substantially over the past couple of years and aligns very well with the 10-year Waste Research Development and Innovation Roadmap for South Africa (2015-2025). Hence significant opportunities exist to expand research activities in this field even further in the next 6-10 years. The academic staff members currently involved with the projects have experience in experimental evaluation and modelling of hydrometallurgical and pyrometallurgical unit operations and processes in mineral and waste processing group. Several of the projects that form part of the overall research program entails a degree of process simulation and costing to compare the technical and economic viability of different processing options. In addition, there will be strong focus on assessment of the environmental impact of processes using rigorous, quantitative recycling efficiency measures and life cycle assessments. Postdoctoral fellow candidates must have obtained their PhD qualification within the last 5 years. Postdoctoral fellows are not appointed as employees and are therefore not eligible for employee benefits.

**Duties:** A post-doctoral fellow with strong extractive metallurgy expertise is required to provide input into several of the existing and planned projects and to consolidate results from different postgraduate projects to achieve the aim of research program. The role of the post-doctoral fellow would therefore be, amongst other, to:

- assist with supervision of postgraduate and undergraduate students by providing technical assistance in process simulation / economic analysis / environmental impact assessment on projects that form part of the research program
- write and submit research publications based on the results obtained in the respective projects, assist with identification of research opportunities, and the preparation of proposals and funding applications

Apart from a strong background in extractive metallurgy, critical skills that would be sought in a post-doctoral fellow in order to complement the current capabilities in the research group include the following:

- Simulation of hydro and pyro metallurgical processes using software packages such as FactSage, HSC, Aspen and EMSIM
- Techno-economic evaluation of metallurgical processes
- Life cycle assessment and related environmental impact and recycling efficiency analyses

**Duration:** The duration of the fellowship is 12 months, extendable subject to successful probation period of 6 months.

**Required skills and experience:**
Candidates should have PhD in the field of extractive metallurgy, with publication track record in international scientific journals in the relevant fields. In addition, the candidate should have strong analytical and technical skills in solution thermodynamics, phase equilibria with particular emphasis on hydro and pyro metallurgical systems.

**Interested candidates should send applications to:**
Prof. G. Akdogan
**gakdogan@sun.ac.za**
accompanied by covering letter, curriculum vitae and contacts of two referees.
The deadline for applications is 1 February 2019.

**About the employer:**

Stellenbosch University is a leading university in Africa, is recognised internationally as an academic institution of excellence and boasts the second highest number of rated scientists of all universities in South Africa. The university has ten Faculties, with eight on the main campus situated within the picturesque town of Stellenbosch, in the heart of one of the world's premier wine producing regions. Details of the university can be found at http://www.sun.ac.za/english/about-us/Why-SU and of the department at http://processengineering.sun.ac.za/.