Postdoctoral Research Fellowship – Techno-economics and Sustainability Assessment of Bioenergy Production and Biorefineries

Department of Process Engineering, Faculty of Engineering, Stellenbosch University,
Stellenbosch 7600, South Africa

Position:
An opportunity for a postdoctoral researcher focused on the techno-economics and sustainability assessment of biomass conversion to energy, chemicals and materials is currently available. Candidates with experience in chemical process design, process simulations such as AspenPlus®, techno-economic assessments of process technologies and Life Cycle Assessment of environmental impacts, are particularly encouraged to apply. Experience with environmental LCA software such as SimaPro would be an advantage. The position will focus on various types of (thermo)chemical and biochemical processes for the recovery of valuable products from various types of plant biomass, in research programs at the Department of Process Engineering and its collaborators. The fellowship is available for a minimum period of 6 (six) months, with a starting date of 1 December 2019, or shortly thereafter. A minimum scholarship of ZAR350 000 per annum has been granted for the position and, provided that the necessary procedures are put in place, this amount will be free of income tax.

Research:
This research group is currently collaborating with industrial and academic partners on the assessment of alternative process options for the conversion of plant biomass into energy, chemicals and mateerials. Such technology developments require techno-economic, environmental impact and sustainability assessments, to identify preferred technology options as well as the required improvements in technological processes for industrial implementation.

The postdoctoral researcher will be expected to contribute significantly to:
A. Independently working on process simulations and techno-economics for a range of process technologies for biomass valourisation
B. Critical evaluation and innovation in the assessment of existing technologies, and proposing preferred avenues of technical development to improve these.
C. The publication of research outputs from current and previous projects
D. Developing new areas of research within the research group.
E. Writing new funding proposals to sustain research activities

Requirements:
A Ph.D. in Chemical Engineering, obtained within the past five years, with a strong background in process simulations, techno-economics and LCA assessments, as described above.

Applications:
A covering letter and curriculum vitae, including all research outputs should be sent to: Prof Johann Görgens, Department of Process Engineering, Faculty of Engineering, Stellenbosch University, Private Bag X1, Matieland, 7602, South Africa Fax: +27 (0)21-808-2059. E-mail: jgorgens@sun.ac.za and see http://processengineering.sun.ac.za/ for more details on the department and Stellenbosch University.

Closing date for applications is 30 October 2019. The university reserves the right not to fill the position.