



POSTDOCTORAL RESEARCH FELLOWSHIP IN RUBBER SCIENCE, ENGINEERING AND TECHNOLOGY – WASTE TYRE AND RUBBER RECYCLING

The Faculty of Science of the Nelson Mandela Metropolitan University in Port Elizabeth, South Africa welcomes applications for a Postdoctoral Research Fellowship in Rubber Science, Engineering and Technology.

The Faculty has been awarded funding by the Recycling and Economic Development Initiative of South Africa (REDISA) to support research into the valorization of waste tyres. A core focus of REDISA is to create social, economic and environmental value from waste tyres via their conversion into other products.

Through this funding, Fellowships for research into the recycling, re-use and conversion of waste tyres and rubber products have been made available.

The value of the Fellowship is R250 000.00. The Fellowship is tenable for one year. Renewal for a further two years is available upon evidence of satisfactory progress.

After nine months of the Fellowship, on application, the Fellow may upon evidence of satisfactory progress be granted an additional R25 000.00 in support of a presentation at an international conference.

The fellow may, on application, be granted an additional R20 000.00 in support of relocation costs to South Africa.

The successful fellow will work with Assoc. Prof. Chris Woolard, Dr. Percy Hlangothi and other staff in the Department of Chemistry. The research activities undertaken by the fellow should tackle research into the recycling of rubber and tyre waste. The focus should preferably be on the use of waste rubber products, such as tyre crumb, to produce new rubber and polymer products. The specific areas of research include:

- Processes for chemical and/or microbial devulcanization
 - The effect of the use of waste rubber products, including rubber crumb, recovered carbon black, extractable process oils and reprocessed ZnO, on the properties of thermoplastics, elastomers and thermoplastic elastomers
 - The modification of rubber crumb to improve ultimate properties of products incorporating rubber crumb
 - Processes for the improved incorporation of rubber crumb into thermoplastics, elastomers and thermoplastic elastomers
 - Process improvements for retreading
- i. The purpose of this Postdoctoral Research Fellowship is to provide an opportunity for experiential learning in rubber recycling research.

- ii. The Postdoctoral Research Fellowship is only available to individuals who have achieved the doctoral degree within the past five (5) years. Applicants may not have held full-time or academic posts since achieving their PhD.
- iii. Applicants should have experience in an appropriate discipline of science, technology or engineering. Preference will be given to candidates who have experience of rubber science, technology and engineering or the recycling of waste materials.
- iv. The successful incumbent will be required to comply with the University's approved policies, procedures and practices for the postdoctoral sector.

All applications should be submitted electronically and should include:

- i) a letter of application which indicates the applicant's research expertise, interests and experience,
- ii) a CV including a list of publications,
- iii) copies of academic transcripts, and
- iv) names and contact details of at least two (2) academic staff who have taught, supervised or worked with the applicant.

Candidates may also submit an accompanying research proposal in the areas, detailed above, to support their application.

Applications should be sent via email to Dr. Percy Hlangothi at percy.hlangothi@nmmu.ac.za

The deadline for applications is 18h00 South African time (GMT+2) on 31 August 2015.

Eligible and complete applications will be considered by a sub-committee of the Faculty of Science which will include at least one member of the Department of Chemistry.

It is understood that, subject to formal application by the Nelson Mandela Metropolitan University to the South African Revenue Services, the Fellowship should be exempt from South African tax, although no guarantee can be given.

The Nelson Mandela Metropolitan University reserves the right to disqualify ineligible, incomplete and/or inappropriate applications. The Nelson Mandela Metropolitan University reserves the right to change the conditions of award or to make no award at all. The Nelson Mandela Metropolitan University reserves the right to extend the deadline for applications.

For further information please contact

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