



## **POST DOCTORAL RESEARCH FELLOWSHIP [PDRF] 2022**

**Faculty of Natural and Agricultural Sciences**

**Material Science, Innovation and Modelling (MaSIM) Research Focus Area**

**Department of Physics**

A full-time postdoctoral position is available in the Department of Physics, MaSIM research focus, Faculty of Natural and Agricultural Sciences, at the North-West University (NWU), South Africa. The fellowship will enable an outstanding doctoral graduate to obtain experience in research and innovation in domestic solar thermal systems with thermal energy storage (TES). The fellowship is available for one year with a possibility of renewal for two additional years depending on the productivity of the candidate.

### **ELIGIBILITY CRITERIA:**

- Must have graduated within the last five years with a PhD degree in Mechanical Engineering/ Applied Physics /any related field with a specialization in Solar Thermal Energy Systems or Solar Thermal Energy Storage. The candidate must have knowledge of domestic solar thermal systems like solar cookers, solar dryers and solar hot water heating systems. Additionally, the candidate must have knowledge of TES systems. Experience in the use of Computational Fluid Dynamics (CFD) for solar thermal systems will be an added advantage.
- Must have authored/co-authored at least 4 publications with at least 2 of them as the first author in the past three years
- Successful applicants must be able to relocate to NWU (Mafikeng Campus) for the duration of the fellowship.
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### **THE SUCCESSFUL CANDIDATE WILL BE REQUIRED TO:**

- Demonstrate relevant experience, understanding and knowledge of solar domestic thermal energy systems with storage with a particular focus on solar cooking and drying systems.
- Conduct innovative research on solar cookers and dryers with TES both experimentally and numerically using experimentally validated models.
- Publish at least 2 research papers annually as the first/main author in high impact factor accredited ISI journals.
- Contribute to the research productivity of the MaSIM solar thermal research group in the Physics Department including mentoring of postgraduate students.

**COMMENCEMENT OF FELLOWSHIP LATEST DATE:** 1 June 2022

### **APPLICATION:**

Please email the following documents to Prof. Ashmore Mawire, email: [ashmore.mawire@nwu.ac.za](mailto:ashmore.mawire@nwu.ac.za)

- Motivation letter, including a 1 – 2-page outline of relevant expertise and experience
- Full CV including a list of research publications.
- Full transcript of recent academic records and copy of doctoral degree certificate and any other relevant certificate.
- Copy of ID document (or copy of passport in the case of foreign applicants)
- Contact details of two academic referees who have taught/supervised/mentored the candidate.

**CLOSING DATE:** 28 February 2022

**FOR ENQUIRES**

Please contact, Prof. Ashmore Mawire, email: [ashmore.mawire@nwu.ac.za](mailto:ashmore.mawire@nwu.ac.za)