

The University of KwaZulu-Natal (UKZN) is committed to meeting the objectives of Employment Equity to improve representivity within the Institution. Preference will be given to applicants from designated groups in accordance with our Employment Equity Plan.

**COLLEGE OF AGRICULTURE, ENGINEERING AND SCIENCE**

**Postdoctoral scholar: Sanitation Technology (18 months)**

**Water Sanitation & Hygiene Research & Development (WASH R&D) Centre (Chemical Engineering)**

**SCHOOL OF ENGINEERING**

**HOWARD COLLEGE CAMPUS**

**REF NO.: WASH R&D CENTRE 5/2022**

The WASH R&D Centre is an externally funded team of professional researchers working on multidisciplinary projects in the urban and industrial water and sanitation sector. The Centre is looking for a post-doc to work on a project related to solar thermal drying technologies, with co-funding from the Water Research Commission (South Africa) and the Royal Academy of Engineering (United Kingdom). Solar thermal dryers are intended to provide a cost-effective solution to treat faecal sludge for municipalities and sanitation practitioners. These technologies rely on the use of solar power to dry and disinfect faecal sludge at low operating costs, contrary to conventional thermal driers that require high energy consumption to provide the latent heat for water evaporation. The WASH Centre have developed a number of solar thermal drying technologies which require testing for their characterization, optimization, improvement and performance. The ultimate goal is commercialization of the technologies.

The project is in partnership with: Swansea University (United Kingdom), Mangosuthu University of Technology (South Africa), eThekweni municipality (South Africa), Khanyisa Projects (South Africa) and EnviroSan (South Africa).

The post-doctorate will be involved in the following activities:

- Organization of testing of the solar thermal drying prototypes
- Modification in the workshop of the prototypes
- Participation in the design of technologies
- Supervision of postgraduate and undergraduate students
- Support in the organization of academic exchange with the partners from the project
- Support in the administration of the project
- Reporting.

The position is available for 18 months, with the possibility of a 6 month extension. The remuneration package will be between R260,000 to 290,000 per year, depending on the experience and academic record of the candidate. There will be a possible trip to Swansea University in the UK, so the candidate should have a valid passport and be willing to travel.

**WASH R&D Centre (Howard College Campus)**

**Discipline of Chemical Engineering, School of Engineering**

**College of Agriculture, Engineering & Science**

**Postal Address:** University of KwaZulu-Natal, Durban 4041, South Africa

**Telephone:** +27 (0)31 260 3375 (office)/+27 (0)72 425 2741 (cell/mobile) **Email:** philpk@ukzn.ac.za **Website:** washcentre.ukzn.ac.za

**Minimum Requirements:**

- Background in mechanical engineering or thermal processing;
- Experience in one of the following fields: water and sanitation, solar thermal energy, thermal drying
- Exceptional skills in design and construction of devices
- Workshop experience
- Organisational and analytical skills
- Excellent writing and oral level of English
- Excellent use of Microsoft Office
- Modelling and coding skills would be an advantage.

**PLEASE NOTE: Eligibility Criteria**

- A doctoral degree obtained in the last five years
- Based at UKZN for the duration of the scholarship

**The closing date for receipt of applications is Friday 17<sup>th</sup> June 2022.**

**Applicants are required to submit the following:**

- (i) a covering letter highlighting their experience in meeting each of the minimum requirements as listed above.
- (ii) a detailed CV including the list of publications
- (iii) contact details for two referees
- (iv) a certified copy of the applicant's doctoral degree certificate or PhD award letter
- (v) a certified copy of the applicant's ID / permanent residency document / foreigners must be in possession of relevant permits.

Applications to be emailed to Dr Santiago Septien Stringel [septiens@ukzn.ac.za](mailto:septiens@ukzn.ac.za) AND Mrs Lungile Zama Shangase, email: [ndlela1@ukzn.ac.za](mailto:ndlela1@ukzn.ac.za) before the closing date. The subject line must clearly indicate the reference no.