



## UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

### FACULTY OF SCIENCE

#### School of Computer Science and Applied Mathematics

### ASSOCIATE PROFESSOR/FULL PROFESSOR (OPTIMAL CONTROL THEORY)

**Description:** The School of Computer Science and Applied Mathematics undertakes high-quality research in a wide variety of areas and is home to several NRF rated scientists. In the domain of Applied Mathematics the School's main research areas include symmetry methods of differential equations, mathematical modelling, control theory, optimization, numerical analysis and fluid mechanics. Furthermore, research areas are in mathematics of finance, which include but not limited to portfolio optimization, risk management, risk measurement, stochastic processes in finance and interested rate modelling. We seek applicants with research and teaching experience in the area of optimal control theory.

#### **Qualifications:**

For Associate Professor: Applicants must hold a doctorate in non-linear optimal control theory, optimal control of partial differential equations (PDEs), or other applied areas of control theory and have a minimum of five years teaching experience at a tertiary institution and must submit a teaching portfolio. Furthermore, the incumbent must have a sustained research record and publications in recognised journals and or scholarly books and experience in postgraduate supervision. The South African National Research Foundation rating is an advantage (if available).

For Full Professor: Applicants must hold a doctorate in non-linear optimal control theory, optimal control of partial differential equations (PDEs), or other applied areas of control theory and have a minimum of ten years teaching experience at a tertiary institution. The candidate must have an international reputation or, in exceptional and appropriate circumstances, a high national reputation. The South African National Research Foundation rating is an advantage (if available). The following factors will be taken into account, (i) teaching ability and experience as evidenced by a teaching portfolio, (ii) intellectual leadership, (iii) management and leadership skills, (iv) participation in scientific or professional activities and (v) evidence of a distinguished research profile including postgraduate supervision.

**Duties:** The successful applicant will be expected to teach nonlinear optimal control theory at undergraduate and postgraduate levels, supervise and/or co-supervise postgraduate students, participate in academic administration and develop a productive research programme.

**Applications to either Associate Professor or Full Professor:** Submit a covering letter accompanied by a detailed updated *curriculum vitae*, NRF rating (if available), description of research interests, a teaching portfolio, certified copies of all educational qualifications and identity document with names and e-mail addresses of three referees.



**To apply:** External applicants are invited to apply by registering their profile on the Wits i-Recruitment platform located at <https://irec.wits.ac.za> and submitting applications. Internal employees are invited to apply directly on Oracle by following the path: iWits /Self Service application/"Apply for a job".

**Correspondence will be entered into with short-listed candidates only.** Short-listed applicants must be available for a personal or telephonic/Skype interview, and the presentation of a short seminar on the proposed line of research may be required.

**Closing date: 21 June 2019**

*"The University is committed to employment equity. Preference may be given, to appointable applicants from the underrepresented designated groups in terms of the relevant employment equity plans and policies of the university. The University retains the right not to make an appointment and to verify all information provided by candidates"*

**♿ Committed to excellence and equity**