

## CAREER OPPORTUNITY

The Council for Scientific and Industrial Research (CSIR) is a leading scientific and technology research organisation, implementing projects throughout Africa and making a difference in people's lives.

### Master's and Doctoral Studentships: Smart Networks

#### About the job:

The CSIR has **Master's and Doctoral Studentship** opportunities in the Future Wireless Networks research group within the Meraka Institute. The incumbents will undertake research duties and include the reporting of research outcomes at regular project seminars and in quarterly progress reports, and where appropriate, the preparation of scientific papers for publication. These opportunities are based in Pretoria.

#### Research topic:

Possible research areas include (but not limited to):

- 5G unique technologies for Internet of Things (IoT);
- Machine to Machine (M2M) Communications or Machine type Communications (MTCs);
- Device to Device (D2D) Communications and IoT applications;
- Network Security;
- Network Resource Management techniques for 5G/IoTs;
- Software defined networks and network function virtualisation;
- Large-Scale IoT-based Cyber Physical System (CPS);
- Long Range Wireless Communications for IoT;
- Ultra-Dense Networks (UDNs).

#### Key responsibilities

- Prepare a research proposal to be approved by both the CSIR and the university;
- Prepare a written literature overview or assessment of the current state-of-the-art around the research topic;
- Perform original research to solve the open research problem that the student identified in his/her proposal;
- Produce sufficient quantity and quality of peer-reviewed publications around this research topic;
- Compile the Master's or Doctoral dissertation/thesis and defending the work successfully;
- Contribute to extra activities that may be outside the scope of the Master's or Doctoral research as per the needs of the research group from time to time.

#### Qualifications, skills and experience

- **For Master's:** An Honours or a BTech degree in computer/electronic engineering, computer science;
- **For Doctoral:** A Master's degree in computer /electronic engineering, computer science;
- Ability to generate research questions and hypotheses: Review, critique and synthesize a body of research, identifying significant gaps in knowledge, methods and study subjects to develop research questions and testable hypotheses
- Effectively communicate issues, research findings and implications of research verbally and in writing to appropriate professional and public audiences.
- Enthusiastic and self-motivated individuals who take ownership and initiative and have the willingness to learn
- Ability to work well under pressure as part of a team as well as independently;
- Good knowledge of wireless networks;
- Good peer-reviewed publication record will be advantageous.

**Applicants must attach the following documents:**

- An abstract of research statement/philosophy (maximum 2 pager) that highlights the problem statement, research questions, research objectives and expected outputs/outcomes/impact of the research;
- Certified copies of academic results (including the latest academic results or transcript);
- Certified copies of tertiary qualifications;
- CV;

If applicable, proof of registration from university or confirmation letter from university supervisor that he/she is willing to be involved in the candidate supervision.

Should you meet the above requirements, please email your CV to [jobapplications@csir.co.za](mailto:jobapplications@csir.co.za) with your name and surname, position title and reference number in the subject line, **(e.g. John Smith: Master's and Doctoral Studentship – Smart Networks: Reference No: 307393)**

**Closing date: 20 December 2016**

**PLEASE NOTE THAT FEEDBACK WILL BE GIVEN TO SHORTLISTED CANDIDATES ONLY.**

For more info, please contact the CSIR Recruitment Centre on **012 841 4774** or email us at [Recruitmentinfo@csir.co.za](mailto:Recruitmentinfo@csir.co.za)

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