

## 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.

### Senior Researcher: Identity Authentication (Two positions)

#### About the job:

The CSIR has vacancies for **Senior Researcher: Identity Authentication** in the Information Security (IS) within the Modelling and Digital Science (MDS) unit. The purpose of these roles is to conduct research and development of systems, software, algorithms and processes within the biometrics and related fields in support of identity authentication of people. These roles will further lead projects in delivering consulting to and/or development of prototypes for clients in the Biometrics space. These positions are based in Pretoria.

For more information about the unit, please visit: <https://www.csir.co.za/node/2103>

#### Key responsibilities:

- Conduct research in the field of image processing and contribute to the development of systems, software, algorithms and processes within the group;
- Develop advanced digital signal processing algorithms;
- Integrate software and systems used for identity authentication into real world applications;
- Perform mathematical analysis of systems and system effects;
- Perform simulation and functional analysis of systems and subsystems;
- Design and execute field experiments in image processing;
- Grow effective relationships with specific clients/stakeholders;
- Supervise (technical) junior employees and students;
- Draft proposals in support of seeking further funding.

#### Qualifications, skills and experience:

- A Master's degree in computer science/engineering, electrical/electronics/biomedical engineering with at least five years' working experience in the field of computer science or engineering;
- A doctoral degree in a related field (computer science/engineering, electronic and electrical engineering, biomedical engineering etc.) will be an added advantage;
- Working experience in programming using at least one of the following languages:
  - Matlab
  - Java/
  - C++
  - .net.
- Experience working in the field of image processing//embedded systems/identity authentication/algorithm development/digital signal processing;

- Experience in project management and must be able to demonstrate the successful completion(or completion of a significant sub-part) managed by individual;
- Experience with operating systems including windows and linux;
- Demonstrated ability to do research and develop junior staff;
- Knowledge of approaches and technology used in Identity Authentication including Biometrics (at least one modality) and Smart Tokens, like smart cards together with understanding of the underlying technology and possible methods of implementation;
- Implementation of security concepts such as one-time-templates, PKI, cryptography and/or implemented identity authentication systems;
- Programing skills in C/C++, Matlab and python;
- Comprehension of systems and system engineering methodologies;
- Track record of published work within digital signal processing field;
- Good technical understanding of project or product requirements;
- Flexibility and adaptability;
- Excellent verbal and written communication skills;
- Must be able to work within team as well as independently;
- Analytical thinking and excellent problem solving skills;
- Self-management (planning, prioritising and time management);
- Innovation and creativity;
- Customer service orientation and Attention to detail.

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: Senior Researcher – Identity Authentication: Reference No: 308031)**

**Closing date: 10 May 2017**

**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)

*The CSIR is an equal opportunity employer. As such, it is committed to the Employment Equity Act of 1998. By applying for this position at the CSIR, the applicant understands, consents and agrees that the CSIR may solicit a credit and criminal report from a registered credit bureau and/or SAPS (in relation to positions that require trust and honesty and/or entail the handling of cash or finances) and may also verify the applicant's educational qualifications and employment history. **The CSIR reserves the right to remove the advertisement at any time before the stated closing date and it further reserves the right not to appoint if a suitable candidate is not identified.***