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 Technologist/ Engineer

About the job:

The CSIR has a vacancy for a **Senior Technologist/ Engineer** in the Mechatronics and Micro-manufacturing (MMM) competence area within the Materials Science and Manufacturing Operating Unit. The incumbent will be working on the development and deployment of cutting-edge technologies to ensure that South Africa becomes a world-class manufacturing nation. This position is based in Pretoria.

About the Unit:

The Micro-manufacturing group focuses on the development of low cost bio- and electrochemical sensors for implementation at the point of care. These sensors integrate complex biological, chemical and electronic detection systems as well as advanced fluidic manipulation techniques in order to create intelligent sensing devices that are simple to operate. Such devices find application in the health, environmental, agricultural, and veterinary monitoring sectors, where they are used for the diagnosis of disease and identification of contaminants.

Key responsibilities:

- Oversee research and development (R&D) projects within the field of biosensors, point of care diagnostics and microsystems technologies. Engage proactively with the research group leader and competency area manager to ensure that project goals have a holistic view;
- Project planning and execution; formulation of project scope, activity timelines, key deliverables, and management of human and financial resources;
- Deliver and maintain a product roadmap and developmental strategy for new and existing projects;
- Examine the complete product development and commercialisation value chain to address the feasibility of new projects. Engage with market and other external stakeholders to identify product competitors, potential users, large scale distributers, manufacturers, and commercialization partners;
- Attract research funding by networking with industrial and governmental funding organisations. Compile grant applications to acquire the required project investments, and identify cost saving opportunities;
- Brainstorm concept designs, prototypes and materials selection;
- Technical (hands-on) manufacture of devices, experimental planning, performance testing, troubleshooting, optimisation of products, and interpretation of experimental data;
- Ensure adherence of product design to customer needs;
- Implementation and testing of developed solutions within the customer environment; field trials and user-testing;

- Ensure research, design and manufacturing processes adhere to ISO 9001 and ISO 13485 standards. Ensure quality control and assurance for complete product development lifecycle;
- Perform safety risk assessments and root cause analysis for manufacturing line, field trials, and laboratory work;
- Supervision, coaching and mentorship of vacation work students, interns, in-service trainees, and junior personnel;
- Publishing of scientific journal and conference articles, and technology demonstrators.
- Stay abreast of latest developments in the field by attending conferences, workshops, and roadshows;
- Compile and present research findings to the team, senior management, and potential funders;
- Project reporting and document management;
- Responsible for intellectual property generated during product development (patents, invention disclosures, etc.) and associated contracting requirements (non-disclosure agreements, memorandum of understanding, research collaboration agreements, etc.).

Qualifications, skills and experience:

- A Masters' degree in engineering or related science field with atleast five years' experience in scientific R&D with at least three years of project management experience;
- A doctoral degree in related field (engineering or related science) will be an advantage;
- Experience in product development from basic research, idea generation, prototype development, development of the minimal viable product, field testing, user implementation and analysis;
- Experience in operationalising new designs/products. Knowledge of product roll-out and distribution mechanisms will be an advantage;
- Understands the user-centric approach to R&D;
- Knowledge of the intellectual property landscape, patents, and contractual agreements such as NDA, MoUs;
- Demonstrates a good publishing record - scientific journal publications and conference talks;
- Good stakeholder engagement and management skills;
- Scientific research and methodologies;
- Analytical, experimental and laboratory skills;
- Management, leadership, organisational skills;
- Technical and business aspects of product development;
- Productive working in a team and as an individual;
- Problem solving and investigative skills;
- Excellent communication, networking and interpersonal skills
- Quick learner and a self-starter;
- Ability to work in a multi-disciplinary environment;

Should you meet the above requirements, please email your CV to jobapplications@csir.co.za with your name and surname, position title and reference number in the subject line, **(e.g. John Smith: Senior Technologist/Engineer: Reference No: 308104)**

Closing date: 23 July 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