



# CENTRE FOR QUANTUM COMPUTATION & COMMUNICATION TECHNOLOGY

AUSTRALIAN RESEARCH COUNCIL CENTRE OF EXCELLENCE

Research Fellow (Silicon Qubit Environment Interface)  
University of New South Wales

School/Unit: Centre of Excellence for Quantum Computation and Communication Technology

Faculty/Division: Science

Salary: Level B A\$88K - A\$104K per year (plus 9% employer superannuation and leave loading)

Appointment: 31 July 2013, with possibility of further extension.

Reference No: 9455

Closing Date: 21 June 2013

## Position Description

We seek an enthusiastic and experienced postdoctoral research fellow with a strong background in the study of semiconductor nanostructure devices. The applicant will be responsible for the characterization and measurement of nanostructures relevant to the development of silicon-based quantum computing.

The goal of this project is the measurement of Si qubit devices and single dopant transport in nano transistors including electron-spin resonance. This involves the development and operation of low noise and high frequency electrical measurements at cryogenic temperatures. The applicant will be working within the 'Silicon Qubit Environment and Interface' Program at the UNSW node of the Australian Research Council Centre of Excellence for Quantum Computation and Communication Technology. The appointee will liaise and coordinate with the Program Manager (Sven Rogge), other staff and students in the research centre, national and international collaborators, and assist with supervision of graduate and undergraduate research students.

## Principal Accountabilities – Attainment of relevant Centre Project Milestones

- Publication of internationally significant research.
- Supervision and training of research students, ensuring high quality research.

## Essential Criteria

Demonstrated internationally significant research in the area of quantum electronics or a related area. Knowledge of equity and diversity principles.

## Desirable Criteria

Significant experience with cryogenics, ultra low noise electronics, and scanning tunneling spectroscopy. Experience in high frequency (GHz) measurement techniques or solid-state laser spectroscopy.

## Application Procedure

Applicants should submit written applications systematically addressing the selection criteria, QUOTING REFERENCE NUMBER. Include business and private telephone numbers; a complete resume including a full list of publications (copies of academic transcript and qualifications where appropriate). Applicants should also arrange to have two letters of recommendation sent by the same deadline to both addresses listed below.

The Recruitment Officer  
Human Resources  
UNSW Sydney 2052  
Email: [jobapplications@unsw.edu.au](mailto:jobapplications@unsw.edu.au)  
Facsimile (02) 9662 2832

Professor Sven Rogge  
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