

Indira Gandhi Centre for Atomic Research, Kalpakkam

Tenure Positions in DST-Project – Advt. No. 01/2006

Indira Gandhi Centre for Atomic Research (IGCAR) at Kalpakkam is currently executing a project to set up a SQUID based Magnetoencephalography (MEG) system for non-invasive studies of human brain. **MEG** is a relatively new technique that maps the neuromagnetism due to neural currents in the brain using **SQUIDS**, which are magnetic sensors of unparalleled sensitivity and is a powerful tool for probing the dynamics of the brain. This project on physics based bio-medical instrumentation has been sanctioned by the Department of Science & Technology, Govt of India as a sequel to the successful development of SQUID sensors at IGCAR. (see: www.igcar.gov.in/msd)

Kalpakkam is located 80 km south of Chennai and is 8 km south of the historic Mahabalipuram.

The project, first of its kind in the country is in an advanced stage of implementation. Several firsts like the construction of a non-magnetic RCC structure with stainless steel reinforcement and procurement of a custom designed magnetically shielded enclosure to attenuate low and high frequency noise signals up to a factor of 100,000 has already been accomplished as part of this project. The project offers further challenges and calls for multifarious skills in disciplines like cryogenics, low temperature physics, superconductivity, specialized algorithms and imaging techniques, extremely low noise analog electronics circuits and system integration.

Applications are invited from qualified, bright and enthusiastic persons interested in innovative high technology areas for project positions. The positions are temporary and will last until March 2008 with a possibility to continue further. SQUID applications is an emerging area worldwide and this project will enable successful applicants to gain expertise in this frontier area for opportunities that may come up nationally and internationally.

Category No. I: Research Scientist (Physics)

Qualification: First class (aggregate over 60%) in M.Sc. (Physics) **and** Ph.D. in Experimental Condensed matter physics/Materials Science. Specialization in low temperature experimentation (4.2 K)/cryogenics is desirable.

Category No. II: Research Scientist (Electronics/Instrumentation)

Qualification: First Class (aggregate over 60%) in B.Tech./B.E. (ECE/E&I/Electronics/Instrumentation/Instrumentation/Bio-Medical or equivalent disciplines) **and** M.Tech./M./E./M.S. in Applied Electronics/Electronics/Instrumentation/Bio-Medical or equivalent disciplines with a First Class (over 60% aggregate). Experience/specialization in analog circuit design of medical electronics is desirable.

No. of positions in each category: One

Scale of pay for both the categories: Rs 10,000–325–15,200

(Total emoluments at the minimum of the scale including all allowances will be Rs 18,600 (approx.))

Last date for receiving application: 10 September 2006.

Detailed advertisement is scheduled to appear in *Employment News* by 3rd week of August 2006.

For Details and Format of Application, visit Website: www.igcar.gov.in

Note: In addition to the project positions as above, visiting positions up to a year are available. Interested experts, researchers, scientists, senior academics and other professionals in the relevant disciplines including neuroscience may contact M. P. Janawadkar, Principal Investigator, DST-MEG Project, MSD, IGCAR, Kalpakkam 603 102; E-mail: mpj@igcar.gov.in. Very short time visitors in the relevant areas are also encouraged.