

Department of Atomic Energy
Indira Gandhi Centre for Atomic Research, Kalpakkam 604 102

ADVT 1/2004: Applications are Invited for Positions Under DST Project

Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam has currently undertaken a project to set up a SQUID based Magnetoencephalography (MEG) system for non-invasive studies of human brain. The project has been sanctioned by the Department of Science and Technology (DST), Govt. of India.

MEG is a relatively new technique that maps the neuromagnetism due to neutral currents in the brain using SQUIDS which are magnetic sensors of unparalleled sensitivity and is powerful for probing the dynamics of the brain. The project is a natural fall out of the successful development of state-of-the-art SQUID sensors at IGCAR. It involves the development for the first time in the country of a MEG instrument, calling for multifarious skills in several disciplines like cryogenics, low temperature physics, superconductivity, specialized algorithms and imaging techniques, design of extremely low noise electronics circuits and system integration. The project is expected to be completed in four years.

The following positions are available. The positions are temporary. 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. 1 : Research Scientists (Cryogenics)

Qualification: (i) Consistently good academic record with a First class (aggregate over 60%) in M.Sc. (Physics) from a recognized University. (ii) Ph.D. in experimental physics with specialization in low temperature experiments (4.2 K)/cryogenics.

Experience (Desirable): (i) Flair for development of advanced techniques/instruments. (ii) Familiarity of working with a SQUID instrument.

Category No. II : Research Scientist (Electronics)

Qualification: (i) Consistently good academic record with First Class (aggregate over 60%) in B.Tech./B.E. (EEE/ECE). (ii) M.Tech./M.E./M.S. in electronics with a First Class (over 60% aggregate), from a recognized university or institution with specialization in microelectronics and VLSI design.

Experience (Desirable): Use of phase sensitive detection techniques and the recovery of low level signals from noise. Experience in high speed analog and digital circuits, their design and fabrication.

Category No. III : Research Scientist (System Integration)

Qualification: (i) Consistently good academic record with First Class (over 60% aggregate) in B.Tech., B.E. (EEE/ECE/Instrumentation). (ii) M.Tech./M.E./M.S. in instrumentation with a First Class (over 60% aggregate), from a recognized university or institution with specializations/project work in electrical/mechanical systems design or assembly. VB software and automation and control.

Experience (Desirable): (i) Image processing software (ii) Signal processing.

Number of positions: One in each category.

Age limit for all positions: Not more than 35 years as on 01-07-2004.

Scale of pay for above all posts: Rs 10,000-325-15,200 (total emoluments at the minimum of the scale including all allowances will be Rs 16,650/- approx.)

Details of Tenure, How to apply and General Conditions as well as the Proforma for application can be found in the website: <http://www.igcar.ernet.in>

Completed application should be sent to: Asstt. Admin. Officer (R), Indira Gandhi Centre for Atomic Research, Kalpakkam 603 102, Kancheepuram District, Tamil Nadu, so as to reach him on or before **15 June 2004**.