

Post Title:	Transmission Electron Microscope Systems Expert
Reference Code	TEMCRANN
Status:	3 Year Contract
Dept/Faculty:	Centre for Research on Adaptive Nanostructures and Nanodevices (CRANN)
Closing Date:	12pm, Wednesday 27 th July 2011
Salary:	Research Scales – Not Specified
Contact for further information	Dr. Diarmuid O'Brien diobrien@tcd.ie
Application Process	<p><i>Applicants should submit by email a full curriculum vitae, to include the names of three referees to:</i></p> <p><i>Aoife Ní Dhubhlaoich</i></p> <p><i>Email : crann@tcd.ie</i></p> <p><i>Website: http://www.crann.tcd.ie/index/About/careers</i></p> <p><i>Please quote the Job Reference Code in the email subject title</i></p> <p><i>Trinity College is an equal opportunities employer</i></p>

JOB DESCRIPTION

To be a leader at CRANN in the design and application of new TEM and STEM techniques. To assist in the maintenance and the future development of the FEI Titan Microscope and to train and support users from both academia and industry involved in research programmes using this instrument. This work will be carried out in collaboration with academic members of staff, research fellows and research students within the Advanced Microscopy Laboratory at CRANN, Trinity College Dublin. The post holder will be able to support and engage in research topics from a wide range of projects offered by Professors Michael Coey, Jonathan Coleman, Hongzhou Zhang, John Boland and others. (<http://www.crann.tcd.ie/index/Research/PIResearch>)

RESPONSIBILITIES

The successful Transmission Electron Microscope Specialist (TEM) Specialist will have responsibility for:

- Supporting, enabling and assisting in the delivery of the world leading research carried out by CRANN researchers and the external researchers who use the TEM.
- The operational management of the TEM facility (FEI Titan 80-300 and GIF Tridiem) within the CRANN Institute.
- Coordination of the equipment use. (50 users in 2010)
- Support of research activities within the centre and research consortium.
- Deliver training and supervised usage, transfer technical skills to CRANN researchers and affiliates.
- Support state of the art imaging and analytical techniques including HAADF STEM, EDAX, EELS, Elemental mapping and Nano-diffraction.
- To establish state of the art sample preparation including Ion Beam Milling
- To represent the project in discussions, negotiations with outside bodies.
- Responsible for marketing the TEM facility to external customers from academia and industry.
- Responsible for carrying out collaborative and contract work on the TEM for academia and industry.
- Responsible for tracking metrics for the use of the tool.
- Ensure that the facilities remain within specification and liaise with the equipment suppliers on specifications.
- Keep up to date information on current developments in STEM techniques.
- Supporting grant applications for funding to utilize the tool.
- Responsible for international benchmarking of the facility and for keeping the TEM performing at its optimum specification.

This is a contract position for a period of 3 years and is funded through competitively awarded research grants.

QUALIFICATIONS/REQUIREMENTS

1. The ideal candidate will have a postdoctoral qualification in Physics/Material Science/Chemistry together with a particular interest in STEM and associated instrumentation a relevant research discipline.
2. Experience with TEM/STEM tools, EFTEM and TEM sample preparation methodologies are required.
3. Ability to work independently and as an active member of the Advanced Microscopy Laboratory working cooperatively with senior and junior colleagues and sharing laboratory and research resources.
4. Excellent oral and communication skills with the proven ability to write clear English at a suitably high standard for the preparation of written reports, funding applications, publications and presentations at both generalist and specialist levels. A key aspect will be effective communication with external instrument manufacturers.
5. Project management and interpersonal skills.
6. Experience of undergraduate/postgraduate training and/or lecturing is desirable.

CRANN Overview

The Centre for Research on Adaptive Nanostructures and Nanodevices (CRANN) comprises a team of over two hundred and fifty researchers from 45 different countries, led by eighteen principal investigators and seventeen investigators, each of whom is an internationally recognised expert in his/her field of research. CRANN principal investigators are based across multiple disciplines including physics, chemistry, medicine, biochemistry and immunology, engineering and pharmacy. CRANN works at the frontiers of nanoscience developing new knowledge of nanoscale chemical and physical phenomena, with a particular focus on new device and sensor technologies for ICT, biotechnology and medical sectors.

CRANN has two state-of-the art buildings both custom designed and constructed for the purpose of leading edge nanoscience research. The Naughton Institute is a 6000m² research facility on the campus of TCD. The CRANN Advanced Microscopy Laboratory (AML) was completed in 2009. This facility is on Pearse Street and houses Ireland's most advanced microscopy instrumentation, enabling Ireland to compete internationally in terms of this capability. The impact is being measured in terms of Ireland 8th place ranking in materials science, of which over 70% of the cited publications are linked to CRANN and its partner schools.

Through its SFI funded Centre for Science, Engineering and Technology (CSET), CRANN has a specific remit to work with industry. CRANN presently has active research engagement with over seventy companies in Ireland and Europe, including multinationals such as Intel and HP and indigenous companies such as Cellix and Eblana Photonics. CRANN has also been very successful in obtaining non-Exchequer funding (e.g. European Union Frameworks) that enabled the establishment of an extensive academic partnership network involving over 100 European universities and 160 universities globally.

On a national basis CRANN leads the INSPIRE consortium (www.inspirenano.com) which comprises the foremost nanoscience researchers in Ireland based across eight academic

institutions. CRANN, in partnership with the Tyndall National Institute, will co-host the Competence Centre for Applied Nanotechnology. This is a new initiative to enable research provider organisations to partner one another on an industry defined research programme.

CRANN has been funded predominately by Science Foundation Ireland and has also obtained competitive funding from the Higher Education Authority, Enterprise Ireland, industry, the EU commission through FP6 and FP7 and philanthropic sources, notably Dr Martin Naughton.

CRANN Advanced Microscopy Laboratory:

The CRANN Advanced Microscopy Laboratory (AML) is a custom built, state of the art 6,000 square foot facility, located in the Trinity Technology and Enterprise Campus, in Central Dublin. The centre houses a critical mass of high end scanning and imaging electron and ion beam microscopes for sample imaging, analytics/characterisation, and nanofabrication.

<http://www.crann.tcd.ie/index/Facilities/AdvancedMicroscopyLaboratory>