



PhD Studentship Available in Scanning Probe Microscopy of Biomolecular Surfaces

Investigating Electrostatic Interactions in Biomolecular Systems at the Nanoscale

Funding is available for up to 4 years and includes a stipend of €15k per annum, plus EU fees.

Location: UCD Conway Institute of Biomolecular and Biomedical Research, Dublin, Ireland

Qualification: Candidates should have or expect to obtain a first or upper second BSc (or equivalent) or MSc in Physics, Materials Science, Biology, or a related area. Funding is restricted to EU applicants only.

Contact Details: Highly motivated individuals with an interest in probing the physics of biological surfaces at the nanoscale should send a letter outlining why they are suitable for the post, along with a current CV including the contact details of two academic referees by **email** to:

Dr. Brian Rodriguez

Lecturer in Nanoscience
Conway Institute of Biomolecular and Biomedical Research
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Belfield, Dublin 4, Ireland
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<http://www.nanofunction.org>

Deadline: Mar. 31, 2010

Nanoscale characterization of electric charge and electric surface potentials in biomolecular systems is critical for understanding biomolecular interactions. Changes in surface potential dictate cellular-membrane transport and thus provide a crucial pathway for cells to interact with their environment. This project will focus on investigating electrostatic interactions at biological surfaces using a scanning probe approach. Mapping electrostatic interactions in biological systems may provide a pathway to understand the role of charge in biological processes.

This interdisciplinary project will provide training in advanced ambient and liquid, structural and functional imaging using an atomic force microscope (AFM) and in biological sample preparation. The successful applicant will be involved in the further development of advanced scanning probe techniques and novel shielded AFM probes and is expected to develop and publish their work and to present their work at national and international conferences. He/She will have access to state of the art AFMs, and will be expected to work closely with the Nanoscale Function Group of Prof. Suzi Jarvis. Travel opportunities to interact with collaborating researchers and industrial partners are also envisaged.

