

Tuesday 15 March 4 PM in 301 MedChem Lecture theatre

Advances in Bio-Atomic Force Microscopy for Biological and Materials Research

A/Prof Michael Higgins

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This presentation will highlight several studies involving the application of Bio-AFM to different biological systems, including natural adhesives, single proteins, lipid bilayer membranes, and living cells. A range of AFM techniques and approaches used in these studies, including single molecule force spectroscopy, single cell force spectroscopy, high resolution frequency modulation AFM, in situ electrochemical AFM and high-speed AFM will be shown. Recent advances in probing the nanoscale and molecular level interactions between biological systems, such as protein and living cells, and materials (e.g. conducting polymers, anti-fouling coatings) will be presented.



Assoc. Prof. Higgins is an ARC Australian Research Fellow at the Intelligent Polymer Research Institute, University of Wollongong, Australia. He is Chief Investigator on both the ARC Centre of Excellence for Electromaterials Science and ARC Bluescope Steel Research Hub. His research interest is electromaterials, biointerfaces and devices for biomedical and industrial applications. The research is supported by the application of Scanning Probe Microscopy techniques to understand interactions at the biological-material interface down at the molecular and nanoscale level.

Colloquium will be followed by a reception at 5 pm in Level 4 common room Building 303.