

School of Physical Sciences Seminar

Speaker: **Dr Lewys Jones** (Ussher Assistant Professor in Ultramicroscopy, TCD)

Date: Thursday 25 Nov at 1 pm

Title: **Performance, flexibility & sustainability in electron microscopy: the impossible dream?**

Abstract: The transmission electron microscope (TEM) is a hugely powerful characterisation tool, being able to deliver structural, chemical and electronic information at down to the atomic scale. These abilities see it deployed to solve some of the biggest questions of our time, from clean energy to virus spike imaging. However, high-end instruments can cost in excess of €5M and the drive for ultimate performance often leads these to be optimised for just a single user base. These cost restrictions can lead to accessibility issues for users and the rapid pace of innovation from vendors can see an instrument go obsolete sooner than intended. In this seminar, I will discuss some of the research of the Ultramicroscopy group at Trinity College Dublin addressing this dilemma. This will include the use of low-cost and modular retrofittable adaptations to the software and hardware to expand the performance, functionality or sustainability of the instrumentation.

Everyone welcome!