

**The University of Warwick  
School of Engineering  
ANDREW LITTLE LECTURE SERIES**



**Innovating for the Future: the convergence of biology, polymers  
and electronics as vital co-operative drivers for enhancing ambient  
assisted living**

**Prof Raymond Oliver PhD, DEng, FEng, FIChemE, CEng  
of Northumbria University  
Date and Venue t.b.c.**

**Abstract**

The 21<sup>st</sup> century will be the century of materials: by 2100, it will be understood how to manipulate and control both the nanoscale and molecular manufacture of materials. Innovation at the interface between materials, electronics and biology therefore is probably the most important area of applied research for the foreseeable future and will be a central technology theme for new industrial systems. It will enable and enhance a huge range of consumer and healthcare related product applications which in turn will lead to greater integration and increasingly invisible 'smarter' material devices and systems 'around the body', 'on the body' and 'in the body'. The talk will focus on the convergence of biology, polymer material science and electronics which will be driven increasingly by the needs of the individual and by communities.

At Northumbria School of Design, we aim to address how social innovation can drive technological innovation through the powerful combination of D:STEM, the integration of creative design with science and engineering. At the forefront of this work is the creation of the P3i Interdisciplinary Design Research Studio and the planned activities within it will be described.

**Raymond Oliver:**

Professor Raymond Oliver holds academic positions at Northumbria University and the Royal College of Art, and is also a Director of Arrow Consulting. Prior to this, he worked for ICI on nanomaterials and process technology. He is a Fellow of the Royal Academy of Engineering and a member of its working group on Nanoscience & Nanotechnologies.

Light refreshments will be available after the talk.

**ALL WELCOME**