

# **A Poonful of Science**

**Friday 12 December 2025 - Friday 12 December 2025**

**James Clerk Maxwell Building**

## **Scientific Programme**

James Clerk Maxwell Building, Kings Buildings, Mayfield Road, Edinburgh, EH9 3FD

9:30. Session 1

11.00. Break

11.30. Session 2

13.00. Lunch

14.00. Session 3

15.30. Break

16.00 Session 4

17.00 Final talk by Wilson

Confirmed speakers include:

**Patrick Warren:** seconded to Edinburgh in 1992 by Alex Lips soon after he joined Unilever and he stayed for a remarkable year.

**Isothermal thermodynamics -- what if fuel cells had been invented before steam engines?**

*How far can thermodynamics be developed at constant temperature? Can one really do without Carnot cycles and heat engines? The answer is yes, to a certain extent: from the Kelvin-Planck statement of the second law one can at least derive the Helmholtz and Gibbs' free energies, so that much of chemical thermodynamics can be recovered. This pedagogical exercise offers a somewhat different perspective on a very old subject, and sheds new light on freighted concepts such as entropy production, fuel cell efficiency, and maximising power extraction.*

**Jill Burke:** Professor of Renaissance Visual and Material Cultures UoE, Wilson's collaborator on "Renaissance goo" project.

**Rebecca Poon:** Wilson's daughter and now PDRA at University of Warwick with interests in molecular biophysics.

**Peter Pusey:** another founder of the Soft Matter group in Edinburgh, pioneer of dynamic light scattering and champion of using hard sphere colloids as an analogy for molecular systems.

**Mike Cates:** the third founder of the Soft Matter group, now Lucasian Professor of Physics at The University of Cambridge, known for his theoretical work on a wide range of soft matter systems.

**Lucio Isa:** a PhD student of Wilson's and now Professor of Soft Materials and Interfaces at ETH Zurich, studying the fundamental properties of colloidal particles and fluid interfaces.

**Laurence Wilson:** another of Wilson's PhD students, now Senior Lecturer at the University of York and pioneer of Differential Dynamic Microscopy to measure bacterial motility and particle sizing.

**John Hone:** a scientist from Syngenta and was an early industrial collaborator with Wilson and expert at solving tough commercial problems.

**David Fairhurst** one of Wilson's first PhD students and now a colleague in Edinburgh

**Landscapes and Portraits: using free energy to predicting behaviour.**

*I will start with a recap of older work on free energy landscapes in colloid-polymer systems. Then I*

*will present more recent work on the three component Ouzo system, and question whether the free energy landscape is still a useful framework for even more complex systems, with additional components or polydispersity.*

**Veronica McKinny** (Wilson's last PhD student and expert in blood droplets)

South Hall, Pollock Estate, 18 Holyrood Park Rd, Edinburgh EH16 5AR  
19.00 Dinner