Science and Technology Facilities Council

Particle Physics

List of PPD seminars

PPD Seminar

An introduction to STFC's Computational Mathematics Theme

Tyrone Rees (Computational Mathematics/SCD, RAL)

20 May 2026, 11:30

R61 CR03 (RAL)

The computational mathematics theme, part of STFC's Scientific Computing department, is home to mathematicians and software developers who develop internationally leading algorithms and associated library-quality software in the fields of numerical linear algebra, optimisation, and inverse problems. In this talk, I will give an introduction to our area, giving a brief introduction to several of the projects we are involved in, highlighting work that may be of relevance to Particle Physics. We will walk through a range of applications, from self-driving cars, to control systems at Diamond, to nuclear fusion modelling at UKAEA, and will show how our algorithms and software are an enabling technology in each case. I will describe how we engage in STFC programmes such as the Ada Lovelace Centre and CoSeC (explaining what these are), and explain how we interact with research communities, including our work with the recently formed CCP-TEPP, a Computational Collaborative Project in Theoretical and Experimental Particle Physics. This talk will give a flavour of the work we do in computational mathematics: where we've come from, what we're working on now, and where we're going in the future.

Suggest a Speaker

All Welcome