

The SUPA Tutorials

As part of an educational programme for those new and perhaps some not so new to the field of FELs, there are to be three one-hour Tutorial Lectures to be given in parallel with the first half of each Poster Session. Three distinguished physicists, their brief biographies and Tutorial titles are given below, will present material that describes the fundamentals of the high-gain FEL interaction, what needs to be done to build one and the exciting new science they will drive.

While the SUPA Tutorials will be aimed at early stage Post-Graduate level study, we are sure that they will be of interest to all in our community.

The Tutorials are sponsored by the Graduate School of the Scottish Universities Physics Alliance, to whom the organisers are grateful for support. Click their logo to find out more:



Scottish Universities Physics Alliance

Monday SUPA Tutorial:

“Introduction to the Theory of the Classical and Quantum High Gain FEL”



At the house of James Clerk-Maxwell

Rodolfo Bonifacio has been involved in many fields of research: In his PhD he derived the Maxwell-Bloch equations for a 2-level system and has since been involved in optical bistability, superradiance, high gain classical SASE FEL theory and more recently the theory of the Quantum FEL. Having spent most of his research career at the University of Milano, he is now a Visiting Professor at the University of Strathclyde. He has been awarded both the Einstein and Michelson Medals.

Tuesday SUPA Tutorial:

“Constructing a High-Gain FEL: How to Make it Work”

Paul Emma helped commission the Tevatron at Fermilab in the early 1980's. He then moved to SLAC in 1988 to help commission and operate the Stanford Linear Collider (SLC). He is now engaged in the final stages of LCLS commissioning as coordinator of that effort.



Paul Emma (left) at LCLS

Tulum, Mexico December 2008



Wednesday SUPA Tutorial:

“Science with FELs”

Jon Marangos is the Lockyer Professor of Physics at Imperial College. His main research interests over the last 20 years have been in intense laser physics, controlling matter with laser fields and attosecond science. His chief preoccupation recently has been in ultra-fast dynamic imaging of molecules using intense laser fields. Since early 2008 he has led the UK NLS (FEL) project and has been especially concerned with assembling the science case.