COMPUTATION ELECTRONIC STRUCTURE OF CONDENSED MATTER

Science & Technology Facilities Council
COMPUTATIONAL PHYSICS

SuperSTEM DARESBURY

7th biennial SuperSTEM Summer School

29 June- 4 July 2018

Advanced Topics in Cs-Corrected STEM & Spectroscopy: Experiment meets Theory

Building on the established series of schools and workshops held at SuperSTEM every two years, this year's school is going beyond the typical syllabus of introductory courses.

Following recent advances in instrumentation, this year's school will address advanced topics in Cs-corrected STEM and spectroscopy techniques and introduce theoretical methodologies & computational tools necessary to rationalise and simulate experimental findings.

The lectures are intended for PhD students, post-doctoral researchers as well as academics and professionals that have an existing background in electron microscopy or relevant theoretical background.

The school program includes a scientific poster session. Participants are encouraged to bring a poster and present some of their work.

Confirmed Speakers: ***Rolf Erni*** *(EMPA),* ***Colin Ophus*** *(LBNL),* ***Rebecca Nicholls*** *(Oxford),* ***Andy Lupini*** *(ORNL),* ***Meiken Falke*** *(Bruker),* ***Hubert Ebert*** *(LMU Munich),* ***Andrew Bleloch*** *(Nion),* ***Martin Lueders*** *(STFC),* ***Andrew Scott*** *(Leeds),* ***Mike Dixon*** *(Hitachi)*





The summer school will take place at the SuperSTEM Laboratory on the STFC Daresbury Campus in Daresbury.

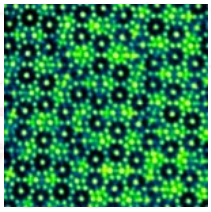
Important Dates

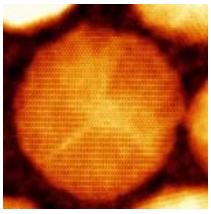
Application*: 15 February – 30 March

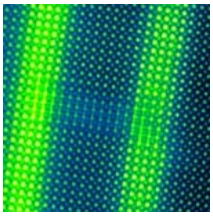
Full Registration : 5 April – 20 April

For more details about the application process, please visit the SuperSTEM webpage:

https://www.superstem.org/school2018







**** Places are limited. A short CV, cover letter and for PhD students a support letter will be required during the application process.***

*Registration Fees***

Student rate : £550

Postdoc, academic professional rate: £650

The registration covers participation in all lectures and practical sessions, coach transport to/from the hotel to the SuperSTEM facility every day of the school, meals & social program, handouts and lecture material.

*****Accommodation will be available at extra cost. For more details see registration page***

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Topics covered

- ✓ principles of aberration diagnosis & correction
- ✓ advanced imaging theory
- ✓ EELS & EDX spectroscopy
- ✓ quantitative image analysis and simulations
- ✓ Introduction to DFT and band structure calculations.
- ✓ *The lectures will be complemented by practical sessions in small groups, including hands on operation of the SuperSTEM instruments and introduction Band Structure and Spectral Calculations*

EPSRC Engineering and Physical Sciences Research Council

www.superstem.org