September 6th 2011
Workshop on Ptychography:
computational lensless microscopy for visible-light, X-ray and electron imaging

Ptychography is a lensless imaging method which uses a number of diffraction patterns to solve for the phase of waves scattered from an object of interest. One important area of application (and the original motivation for its development) is in resolution enhancement for atomic-scale imaging using X-rays or electrons where the manufacture of good quality lenses is difficult or very expensive.

The technique is now widely employed at X-ray wavelengths where it is close to becoming a standard imaging tool. Electron ptychography has been shown to work with proof-of-principle experiments, but its development is as yet relatively immature. Visible light ptychographic microscopes are now available commercially; their key benefits being quantitative, direct and absolute (not differential) phase imaging over an unlimited field of view; post-experiment focussing; some degree of three-dimensional imaging; and the ability to have very large working distances.

This one day workshop is intended for researchers who wish to learn more about ptychography. It is organised as part of a Basic Technology programme led by the University of Sheffield (Professor John Rodenburg). Lectures will consist of tutorials describing the principles behind the technique and will also cover latest developments in the field.

Attendance is free, based on a first-come first-served basis.

To reserve your place at the event please email: pi-phi@sheffield.ac.uk or contact the project team on 0114 22 25040.

The workshop will take place at Lucas House, University of Birmingham Conference Park. Please see the following website:
http://www.birmingham.ac.uk/partners/conferences/venues/conferencepark.aspx

For more information on the project and research completed please visit www.pi-phi.org