3D & 4D Characterization: X-Ray Computer Tomography from the Micro- to Nano-scale

RSC Host: Dr. Luisa Amelia Dempere

Presenter: Dr. William Harris

Affiliation: Zeiss Microscopy

Time: 10:05 AM – 10:50 AM EST

Zoom: Click here to join!

Abstract

In recent years, X-ray microscopy (XRM) has grown out of origins at synchrotron facilities and set new benchmarks in high resolution, nondestructive 3D characterization. The incorporation of magnifying elements in the form of either scintillator-coupled objective lenses or reflective/diffractive X-ray optics have enabled the 3D imaging approach to break through the micron spatial barrier and into the nanoscale regime. Furthermore, an expansion in the variety of contrast modalities has created increasingly rich and descriptive data sets, for example using X-ray phase contrast or diffraction tomography. This talk will cover a quick overview of the recent technology innovations, followed by a survey of some of the exciting scientific opportunities that have recently become available to researchers in their home laboratory setting, spanning across applications in materials science, engineering, biology, and geoscience.

More about the event

Presenter Bio: Dr. Will Harris is a product marketing manager at ZEISS Microscopy focusing on X-ray based imaging systems for research applications. He has held past roles at ZEISS in marketing and sales at the global level, and has also spent time driving business development in the ultrafast laser market. Will received both his B.S. and Ph.D. in mechanical engineering from the University of Connecticut, where he worked on synchrotron-based X-ray microscopy applications related to energy materials.

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