APS Scientific Computation Seminar Series

Speaker: Arthur Glowacki
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Title: XRF-Maps: X-Ray Fluorescence Microscopy Software to Streamline Data
            Analysis

Date: Monday, July 16, 2018

Time: 1:00 p.m.

Location: 401/A1100

Hosts: Nicholas Schwarz and Brian Toby

Abstract:
X-Ray Fluorescence Microscopy (XFM) experiments require attention and time to
properly set up and analyze the results. The accurate analysis of XRF data involves
multiple parameters and deep knowledge of the scanning equipment. While simple fast
approaches exist (e.g., 'spectral ROIs'), these tend not to work well with more complex
data (e.g., overlapping peaks). We have implemented several different fast and more
accurate analysis methods with the XRF-Maps software.

To streamline the analysis, and make optimum use of dedicated analysis computers, we
created a web interface to submit XRF analysis jobs that provides feedback on processing
status and the results of specific jobs. The interface significantly simplifies the analysis
process and can be expanded to pass jobs from one technique to another. We will also
show the latest collaboration with the MONA Project where we are streaming the analyzed
results as the scan is running to give a live view to users.