

**Thursday, March 18th
4:00 p.m. CDT**



DR. JESSICA MCCHESNEY

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Hosted by MS&E Professor Jason Kawasaki

Exploiting soft X-ray ARPES to look beyond the surface in correlated electron systems

Taking advantage of the unique niche that soft x-ray ARPES provides, i.e. bulk sensitivity while maintaining momentum resolution, we explore the bulk band structure of several classes of strongly correlated materials. These materials, which include topological insulators, heavy fermions and complex oxides, have very rich phase diagrams where small changes in carrier concentration, such as that at the vacuum/surface interface, can significantly alter the band structure. These results showcase the performance of the intermediate energy x-ray (IEX) beamline at the Advanced Photon Source, Argonne National Laboratory, where the photon energy can be tuned from 250 to 3000 eV in order to exploit the varying surface/bulk sensitivity. In addition, this energy range provides access to many electronically relevant absorption edges where the resonance process is used to enhance the sensitivity for buried interfaces and dilute signals, in addition to further define the character of the bands.

Zoom link: https://go.wisc.edu/mse900_mcchesney

Meeting ID: 986 4468 1493

Passcode: 409223

A Q+A session with Dr. McChesney, moderated by Professor Jason Kawasaki, will follow the seminar. The Q+A session will take place via the same Zoom link as above.