



Partha P. Paul
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Current Position:

Postdoctoral Scholar, Photon Science, SLAC National Accelerator Laboratory.

Background:

- 2018-present - Postdoctoral Scholar, SLAC National Accelerator Laboratory.
- 2013-2018 – PhD in Mechanical Engineering (Materials Science), Northwestern University.
- 2012-2013 – Masters in Mechanical/Materials Science, Indian Institute of Technology Kanpur.
- 2008-2012 – Masters in Mechanical Engineering, Indian Institute of Technology Kanpur.

Activities:

- Conference symposium chair:
 - Oct 2020 - Fast Charging Batteries - Pacific Rim Meeting, The Electrochemical Society.
 - Nov 2019 - Electrolytes and Interfaces - Materials Research Society Fall Meeting.
 - July 2019 - Chemical Processes - 40th International Conf. on Vacuum UV and X-ray Physics.
- Frequent user of APS and other synchrotron sources (including NSLS-II, CHESS, ALS) since 2013 (including 3D XRD, microXRD, microCT, powder diffraction).
- Attended workshop on 'In-Situ Characterization During Advance Manufacturing' Aug 2016 at APS.
- Attended LANSCE School of Neutron Scattering at Los Alamos in 2015.

Interests:

My research interests primarily lie in using advanced characterization techniques to understand different materials systems, at the intersection of materials science, chemistry and mechanics. Using shared synchrotron facilities as been a central theme of my research, from the beginning of grad school till today. I have primarily used diffraction, spectroscopy/fluorescence and imaging techniques to study phase transformations and fracture in metallic alloys, as well as degradation in batteries over my research career, and recently in nuclear forensics.

Goals:

As a frequent user of various beamlines at APS as well as other synchrotron sources, I feel I can represent the user community and their needs and requirements well. This is of increased significance with the upcoming shutdown and consequent upgrade scheduled at APS, during which communicating the progress and breakthroughs is particularly important. Keeping the user community engaged and active in some capacity through the upgrade period will be especially important in the ramping up of research as the upgrade nears completion and regular use is resumed.