Rakesh R. Kamath

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Current Position

- 2016 – Present: **PhD candidate**, Department of Materials Science and Engineering, University of Tennessee, Knoxville (Expected completion – Fall 2021).

Background

- 2014 – 2016: **M.E**. in Materials Engineering, Indian Institute of Science (IISc), Bengaluru, India.
- 2010 – 2014: **B. Tech** in Metallurgical and Materials Engineering, National Institute of Technology (NITK), Karnataka, India.

Professional service and relevant experience

- 3+ years of experience as a user at multiple synchrotron (APS: 32-ID, 11-ID, 2-BM) and neutron (SNS: BL7-Vulcan) beamlines.
- Selected to participate in the 20th National School on X-ray and Neutron scattering (NXS) – 2018 for a week each in Argonne National Lab and Oak Ridge National Lab.
- Awards and Program Appreciation Chair (Term: 2019-2020), Oak Ridge Chapter of ASM
- Public Relations Chair (Term: 2020-2021), Oak Ridge Chapter of ASM.
- Organizing Committee, Educational Symposium on Residual Stress Determination Techniques for Science and Engineering (Oak Ridge Chapter of ASM, May 2019).
- Student Member, Materials Advantage (ASM Intl.) and Materials Research Society (MRS).

Research Interests

- Additive manufacturing of metallic alloys for critical applications.
- Application of synchrotron and neutron techniques to probe fundamental phenomena occurring in advanced manufacturing processes (additive manufacturing, friction-stir processing).

Goals

Being a frequent user of multiple beamlines at APS myself, I believe that I can serve the user community by effectively communicating their needs to the APS management team, especially with the APS-U happening in the near future. In specific, my goals are to: (1) Advocate for the development of essential software infrastructure to enable users to process their datasets remotely; (2) Aid the on-going dialogue between the user community and APS on the deployment of (artificial intelligence based) software tools to help users, both expert and non-expert, in extracting useful information faster from large datasets - thus, reducing the end-to-end time from experimental ideation to dissemination; (3) Promote research on advanced manufacturing at the APS with a focus on entities trying to bring in novel processes to the market.