

Stuart R. Stock

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Current Position Description: Research Professor. I do basic research on a variety of problems. I also run my department's trainee seminar series (PhD students, post docs, providing guidance on how to give effective presentations) and serve as Chair, Northwestern Univ. Radiation Safety Committee. Most of my data collection takes place at the APS.

Education and Employment History:

- BS, MS, Post-doc, Mater. Sci. & Eng., Northwestern Univ., 1977, 1978, 1983-4.
- PhD, Metallurgical Eng. Univ. of Illinois Urbana-Champaign, 1983.
- Asst./Assoc./full Professor, Mater. Sci. & Eng. Georgia Inst. of Technology, 1984-2000.
- Research Professor, Feinberg School of Medicine, Northwestern Univ., 2001-present.

Interests: I have been using synchrotron radiation for my research for over 40 years, and since 2000 at the APS. I do microCT (synchrotron and lab-based), nanoCT, position-resolved x-ray scattering and diffraction and x-ray fluorescence mapping. I study biomineralized tissues (sea urchins, sharks, mammals), cochlear structure, scaffold structures for bone healing, and aortic morphology.

Goals/ideas for Advocacy for the User Community: The next two years are critical to the well-being of APS and its users, given the continuing recovery from the pandemic and the upgrade, dark-time and restart. I think it is essential that the Committee has a member who experienced APS's history over 2+ decades. I would advocate for resumption of the User Science Seminar series when users return; I have found it useful in identifying APS staff with whom I could do future experiments. With NIH and NSF (and some journals) requirements for meeting FAIR (findability, accessibility, interoperability, and reuse) standards, enabling users to efficiently comply will be increasingly important for APS's success. The wide range of APS data types and experiments means that no one solution will work, but advocating for added resources at the local beamline levels will be a second point of emphasis for me. I am already active in this area within the microCT community. Finally, if it is not already happening, I propose that each Committee member would contact individual users (not known to them), say 10/yr, to get their suggestions.

Honors and Activities: 1) R&D 100, 1991, for X-ray Tomographic Microscope. 2) Fellow, SPIE, 2021. 3) Program Committee (2004-present) and Chair (2008-2016) of the biennial SPIE conference "Developments in X-ray Tomography". 4) Board Member, ToScA-NA (Tomography for Scientific Advancement – North America), 2018-present. National meetings: 2019, 2021, 2023. 5) Assoc. Editor journal "Tomography of Materials and Structures", 2021-present. 6) Member APS PRP 2007-2011. 7) Author of books: <u>MicroComputed Tomography: Methodology and Applications</u>, 1st, 2nd Ed., 2008, 2019; <u>Elements of X-ray Diffraction</u>, 3rd Ed., 2001.