THE MATERIALS SCIENCE AND ENGINEERING DEPARTMENT
FALL COLLOQUIUM SERIES PRESENTS:

Professor Ji-Cheng 'JC' Zhao

Dean of College of Engineering

University of Connecticut

High-Throughput Experimentation and Rapid Synthesis for Accelerated Materials Discovery

Experimental techniques for rapid collections of materials data and holistic approaches to integrate experimental and computational data will be described with examples. Localized property measurements on composition gradients created in diffusion multiples allow high-throughput collection of several materials properties as a function of composition, in addition to phase diagrams and diffusion coefficients. An approach was demonstrated to establish reliable diffusion coefficient (atomic mobility) databases by holistically integrating both experimental and computational data. Recent developments in ultrafast syntheses and autonomous experiments will also be presented.

Dr. JC Zhao has been Dean of College of Engineering at University of Connecticut (UConn) since August 2024. He was Chair of the Materials Science and Engineering (MSE) Department at University of Maryland (UMD) for 5 years before joining UConn. Zhao was a Program Director at ARPA-E (Advanced Research Projects Agency-Energy) from 2014 to 2017 and was a professor at Ohio State from 2008 to 2014 and also from 2017 to 2019. Before academia, Zhao was a Materials Scientist at GE Research Center for 12 years (1995-2007). He holds 49 issued U.S. patents and was inducted a Fellow of the National Academy of Inventors. Zhao is a Fellow of AAAS, ASM, MRS and TMS; and was inducted into the National Academy of Engineering in 2023. A more detailed bio can be found at his website: https://engineering.uconn.edu/jc-zhao/

Tuesday, Sept.16 • 4 pm CT • Tech L211

In person only; no Zoom

Questions? Contact allison.macknick@northwestern.edu

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