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TMS2025

154th Annual Meeting & Exhibition

March 23–27, 2025
MGM Grand Las Vegas
Hotel & Casino
Las Vegas, Nevada, USA
#TMSAnnualMeeting

SUBMIT AN ABSTRACT FOR THE FOLLOWING TMS2025 SYMPOSIUM:

DATA-DRIVEN AND COMPUTATIONAL MATERIALS DESIGN

Artificial Intelligence Applications in Integrated Computational Materials Engineering

This symposium aims to carve out a unique niche at the intersection of artificial intelligence (AI) and materials science. This symposium will focus on the innovative fusion of AI with Integrated Computational Materials Engineering (ICME) to address complex challenges in materials engineering that are not covered by traditional methods. Key areas of discussion will include the use of AI for advanced materials characterization, leveraging AI in the design of new materials with tailored properties, and the application of AI in understanding and predicting materials degradation and failure mechanisms. Additional areas of interest include the role of AI in enhancing the efficiency and sustainability of materials manufacturing processes, the ethical use of AI in materials engineering, tackling concerns related to data security and algorithm transparency. Our goal is to foster a multidisciplinary dialogue that bridges the gap between AI technology and practical materials engineering challenges, setting a new standard for the future of ICME.

ORGANIZERS
Wenwu Xu, San Diego State University; **Ram Devanathan,** Pacific Northwest National Laboratory; **Vikas Tomar,** Purdue University; **Qiaofu Zhang,** University of Alabama; **Eshan Ganju,** Purdue University; **Avanish Mishra,** Los Alamos National Laboratory; **Victoria Miller,** University of Florida; **Ghanshyam Pilania,** General Electric (GE Aerospace Research)

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