ARTIFICIAL INTELLIGENCE IN MATERIALS SCIENCE AND ENGINEERING

Advancements in Industry, Research, and Materials Manufacturing

April 3-5, 2023

This course will include five, half-day, virtual modules. On-demand access will be available through May 8, 2023.

Artificial intelligence (AI) is attracting the interest of scientists and engineers, entrepreneurs and government leaders, and researchers and educators. Through the Artificial Intelligence in Materials Science and Engineering online course, participants will benefit from the guidance of a team of experts to gain an overview, learn about important developments in AI, and review the impact of AI on materials science and engineering and related manufacturing processes. Attendees will build upon their understanding of how AI can help to accelerate processes, reduce costs, and innovate products. This course is designed for industry professionals, researchers, and university students, as well as leaders and managers who would like to have a deeper understanding of AI in materials science and engineering and related manufacturing processes.

WHAT YOU WILL LEARN

This course will include the following modules:

- Introduction to AI in Materials Science
- Introduction to Machine Learning (ML) and Deep Learning for Materials Science
- Computer Vision with Deep Learning for Materials
- Autonomous Research: Theory and Implementation
- AI/ML for Materials Manufacturing: Understanding the Applications, Building Predictive Modeling, and Uncertainty Quantification

LEARN FROM THE EXPERTS

Pictured from left to right: **Benjamin Afflerbach**, University of Wisconsin-Madison; **Ankit Agrawal**, Northwestern University; **Raymundo Arróyave**, Texas A&M University; **David Blondheim, Jr.**, Mercury Marine; **Sayan Ghosh**, General Electric Research; **Vipul Gupta**, General Electric Research; **Ryan Jacobs**, University of Wisconsin-Madison; **Benji Maruyama**, Air Force Research Laboratory; **Bryce Meredig**, Travertine Labs LLC; **Dane Morgan**, University of Wisconsin-Madison; and **Kristofer Reyes**, University at Buffalo – The State University of New York.

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