NATIONAL ACADEMIES Sciences Engineering Medicine

CHEMICAL SCIENCES ROUNDTABLE | BOARD ON CHEMICAL SCIENCES AND TECHNOLOGY

AI + Scalability

Hosted by the Chemical Sciences Roundtable

AI + Y 2024 Series

THURSDAY, OCTOBER 3, 2024

About

This episode of **AI + Scalability** seeks to explore at scale efforts across the chemistry and chemical engineering enterprise that successfully employ AI to support the sustainable growth and development of the chemical industry, which emerges from the lab. The chemical industry endeavors to apply AI tools to generate improved energy efficiency, reliability, selectivity, decreased environmental impacts, and safety in industrial chemical processes. AI tools have already been shown to improve processes for chemical engineering but the potential digital revolution in the chemical industry is still unfolding. Discussions will include what obtaining these outcomes will require, such as leveraging the existing and potential capabilities of AI, applying them to meet new challenges that arise, and evolving the existing methods, processes, systems, tools, and labor force in the space. **Register Here!**

12:30PM–12:35PM **Introduction to the National Academies, The Chemical Sciences Roundtable, Webinar Planning Committee, and NAS Staff**

Michael Janicke, CSR Director, National Academies

12:35PM–12:40PM **Welcome from Moderator, Introduction to Panelists and Webinar Topic**

Melanie Mesropian, Assistant Editor, Chemical Engineering Progress, American Institute of Chemical Engineers

12:40PM–01:20PM **Personal Experiences from Chemical Industries**

Leo Chiang, Sr. R&D Fellow, The Dow Chemical Company
Greg Mulholland, CEO, Citrine Informatics

01:20PM–01:40PM **Moderated Panel Discussion**

Melanie Mesropian, Assistant Editor, Chemical Engineering Progress, American Institute of Chemical Engineers
Leo Chiang, Sr. R&D Fellow, The Dow Chemical Company
Greg Mulholland, CEO, Citrine Informatics

01:40PM–01:55PM **Q&A with the Audience**

Leo Chiang, Sr. R&D Fellow, The Dow Chemical Company
Greg Mulholland, CEO, Citrine Informatics

01:55PM–02:00PM **Final Remarks**

Leo Chiang, Sr. R&D Fellow, The Dow Chemical Company
Greg Mulholland, CEO, Citrine Informatics

BIOGRAPHIES ON SPEAKERS

Moderator - Melanie Mesropian, Assistant Editor, Chemical Engineering Progress, American Institute of Chemical Engineers

Melanie Mesropian is an assistant editor of Chemical Engineering Progress (CEP) at AIChE. Prior to her position, she was a technical entities intern at AIChE and a research intern at NASA Ames. Mesropian received her bachelor's in chemical engineering from the University of California, Los Angeles (UCLA).

Panelist - Leo Chiang, Sr. R&D Fellow, The Dow Chemical Company

Leo Chiang is a Senior R&D Digital Fellow at Dow Core R&D. He has a broad research interest in emerging AI and Data Science approaches and his ambition is to guide the industry to achieve AI at scale. Leo is on a mission to improve data acumen for workforce at all levels at Dow; He is proactive in working with universities to support data science education in chemical engineering and the broader STEM community. He was elected to the National Academy of Engineering (NAE) in 2023Leo has a B.S. degree from University of Wisconsin at Madison and M.S. and Ph.D. degrees from the University of Illinois at Urbana-Champaign, all in Chemical Engineering.

Panelist - Greg Mulholland, CEO, Citrine Informatics

Gregory Mulholland is the founder and CEO of Citrine Informatics, the first artificial intelligence platform enabling the faster development and deployment of advanced materials and chemicals. He is an internationally recognized leader in materials technology, industrial AI, and digital transformation. Under his leadership, Citrine has partnered with some of the world's largest and most innovative companies to create greener, more affordable, and higher-performing products. Gregory serves as a board member, advises deep tech venture funds on investment strategies, and is frequently invited to lecture on AI and the business of AI at leading universities. He has been honored as a Technology Pioneer at the World Economic Forum, won the Start Up and Scale Up challenges at the World Materials Forum, and received over a dozen start-up and business awards. He holds an MBA from the Stanford Graduate School of Business, an MPhil in Materials Science from Cambridge University, and a BS in Electrical Engineering from NC State University.