

ECE DISTINGUISHED SEMINAR SERIES PRESENTATION

Shaping the Future: Generative AI Applications at MIT Lincoln Laboratory

ABSTRACT

Generative AI (GenAI) is revolutionizing the field of artificial intelligence and transforming the workplace by enabling machines to create new content—from text and multimedia to simulations and complex data models—enhancing human-machine interaction and opening new possibilities across disciplines.

In this seminar, Dr. Joseph Campbell, a Laboratory Fellow at MIT Lincoln Laboratory, will share how MIT Lincoln Laboratory is driving innovation through cutting-edge applied research and development in GenAI. Attendees will explore the role of GenAI in addressing national security challenges and other real-world applications.

This presentation, designed to be accessible to a general audience, will cover:

- Real-world use cases in defense, science, and enterprise applications
- Recent commercial successes and research advances
- Ethical, security, and technical challenges posed by GenAI



BIO

Dr. Joseph P. Campbell is a Laboratory Fellow at MIT Lincoln Laboratory (MIT LL), recognized for his sustained contributions to MIT LL and national programs. Since joining in 2001, he has focused on developing AI technologies for government applications, emphasizing impactful evaluation and operational deployment. Dr. Campbell has authored over 120 technical publications with more than 8,000 citations and an h-index of 40, holds one U.S. patent, and led multiple U.S. federal and NATO standards. His innovations in speech processing, biometrics, and machine learning earned him MIT LL's Technical Excellence Award for advancing human-language technologies and supporting national security. Dr. Campbell holds degrees in electrical engineering from Rensselaer Polytechnic Institute, Johns Hopkins University, and Oklahoma State University (OSU). His 1992 OSU dissertation, Features and Measures for Speaker Recognition, won the Graduate Research Award for best dissertation university-wide. An IEEE Life Fellow, Dr. Campbell will be inducted into OSU's CEAT Hall of Fame and receive the Lohmann Medal in 2024.



PRESENTED BY

DR. JOSEPH CAMPBELL
OSU Class of 1992, CEAT Hall
of Fame Inductee, Lohmann
Medalist 2024

FRIDAY NOVEMBER 8

3:45–5PM

CHICKASAW NATION STEM AUDITORIUM

140 ENGINEERING SOUTH

CONTACT

DR. WEIHUA SHENG
School of Electrical and
Computer Engineering
weihua.sheng@okstate.edu.
405-744-7591

SPECIAL OPPORTUNITIES

Explore internship and career opportunities at MIT Lincoln Laboratory, a DoD Federally Funded Research and Development Center committed to advancing technology for national security. ***Join us to learn how Generative AI is shaping the future and how you can become part of this exciting journey!***



SCHOOL OF
**ELECTRICAL AND
COMPUTER ENGINEERING**
College of Engineering, Architecture and Technology