PURDUE UNIVERSITY | Elmore Family School of Electrical and Computer Engineering

# Faculty Candidate Seminar
# Professor of Engineering Practice, Semiconductor

## Gbenga Daniel Obikoya

Monday, March 31, 2025
Presentation: 10:30 – 11:30 A.M.
MSEE 112

## Leveraging Professional Practice to Drive Innovation and Excellence in Semiconductor Education

**Abstract:** The increasing demand for semiconductors and their continuous technological advancements necessitate innovative educational approaches to bridge the gap between theory and practice. As the shortage of skilled professionals in the semiconductor industry grows, strengthening collaboration between academia and industry is crucial to expand the workforce. Experts with extensive experience in semiconductor materials and devices are expected to leverage their knowledge to enhance semiconductor education through hands-on learning and industry partnerships.

This presentation will explore strategies for improving semiconductor education, drawing from experience in solar photovoltaic technologies—including fabrication, characterization, and reliability studies—as well as academic-industry collaboration. It will emphasize the importance of integrating professional practice insights to update curricula that align with industry needs while fostering interactive learning, inclusivity, mentorship, and real-world applications through lab work, project-based assignments, case studies, and internships. Additionally, the presentation will highlight the role of research collaboration in advancing semiconductor education and preparing students for an evolving technological landscape.

**Bio:** Dr. Gbenga Daniel Obikoya is an educator, researcher, and engineer who holds a PhD in Electrical and Computer Engineering from the University of Delaware. He specializes in the fabrication, characterization, and stability study of silicon and cadmium telluride solar cells. His PhD research focuses on degradation, doping, and metastability defects in solar photovoltaic devices. With over a decade of teaching experience and more than 6 years of research in solar energy technology and applications, he has contributed to advancements in photovoltaics and microgrid design. He has tutored semiconductor and other engineering courses in the US and Nigeria. He has not only mentored students but also contributed to curriculum development and program accreditation while working as a lecturer in Nigeria. Presently, as a Research Engineer at the Community Dreams Foundation, he designs renewable energy microgrid systems and studies their resiliency. He is a member of IEEE and NSE, a Registered Engineer (R.Eng.) with COREN, and a recipient of the Petroleum Technology Development Fund (PTDF) scholarship. He has also received recognition at the 49th IEEE Photovoltaic Specialist Conference.

Host: Peter Bermel ~ pbermel@purdue.edu