

Speaker Biography: Dr. Barbara Oakley

Barbara Oakley is a Distinguished Professor of Engineering at Oakland University in Rochester, Michigan. Her work focuses on the complex relationship between neuroscience and social behavior. She created and teaches Coursera's "Learning How to Learn," one of the world's most popular massive open online course with nearly four million registered students, along with other popular "Top Online Courses of All Time." Barb is a *New York Times* best-selling author who has published in outlets as varied as the *Proceedings of the National Academy of Sciences*, the *Wall Street Journal*, and *The New York Times*—her book *A Mind for Numbers* has sold over a million copies worldwide. She is the winner of the McGraw Prize—the colloquial "Nobel Prize for Education" and is a Fellow of both the Institute of Electrical and Electronics Engineers and the American Institute for Medical and Biological Engineering

Main Presentation: "Using Generative AI to Strengthen and Speed Learning"

In today's rapidly evolving business landscape, professionals across industries are seeking ways to harness the power of AI to stay ahead of the curve. This talk will demonstrate how AI, particularly *transformers*, can enhance core cognitive processes like attention, synthesis, and retention, enabling accelerated learning and improved performance in fields as diverse as academics, talent development, cyber security, finance, and supply chain management.

By understanding the parallels and differences between AI models and human brain function, attendees will gain insights into how to craft prompts and interactions that align with their specific domain challenges and goals. Generative AI is not merely a tool for answering questions; it is a powerful teacher that can be tailored to the unique needs of each field, driving innovation, productivity, and competitive advantage.

Attendees will leave with practical strategies to integrate AI into their learning and operational processes, positioning themselves and their organizations for success in the AI-driven future. Whether you are a student aiming to excel in learning, or a faculty seeking effective teaching methods, CLO looking to upskill your workforce, a CIO aiming to bolster cybersecurity, a CFO seeking to optimize financial processes, or a supply chain leader striving for greater efficiency, this talk will provide valuable insights to help you unlock the power of your own brain by leveraging AI's capabilities.

Ancillary Presentation: "Unlocking the Neuroscience of Engagement: Crafting Irresistible Learning Experiences"

Imagine a world where training sessions are as addictive as the most engaging video game and as compelling as a blockbuster movie—that's the untapped potential of a neuroscientific approach to learning. By drawing insights from the same neural circuits that respond to the dramatic arcs and emotional beats of cinema, this talk—by engineering professor Barbara Oakley, creator of some of the world's largest and most popular online courses—will present a fresh perspective on fostering a learning culture within the academic / corporate environment.

This session will demonstrate how mechanisms of habit formation, neural plasticity, and focused versus diffuse modes of thinking can be applied to employee development programs. We'll also explore why active learning, while important, isn't the cure-all it's often made out to be.

Diving deeper into the neuroscience of learning, we'll examine how the brain's attentional systems, memory networks, and reward pathways can be strategically engaged to optimize learning outcomes. By understanding the intricate dance between bottom-up and top-down processing, as well as the crucial role of feedback and reinforcement, learning and development professionals can craft training programs that resonate with the brain's natural learning architecture. Attendees will leave with a set of science-backed practical insights for designing learning initiatives that captivate, inspire, and transform.