Rethinking Engineering Education
Systems Thinking for a Complex, AI-Augmented World

Dr Nikita Hari
Head of Teaching and Research Design
Department of Engineering Science, University of Oxford

Dr Nikita Hari is the Head of Teaching and Research Design at the Department of Engineering Science, University of Oxford, an Honorary Associate Professor in Engineering Education at University College London, and a visiting Professor at multiple South Indian Universities. A multi-award-winning engineer, she serves as Co-Chair of the Complex Systems Initiative at the Engineering Professors' Council (EPC) and is an elected fellow of the UK Young Academy (UKYA). Holding a doctorate in Electrical Engineering from the University of Cambridge, her global career spans academia, industry, and entrepreneurship. She is the co-founder of two AI EdTech ventures, a TEDx speaker, and a passionate advocate for inclusive engineering. Dr Hari works at the intersection of engineering pedagogy, practice, people, and policy—committed to inspiring the next generation of changemakers for a just and sustainable future.

As engineering challenges become increasingly complex and interdependent, the future of education must evolve beyond content delivery to cultivate engineering thinking—anchored in systems thinking, ethical reasoning, and purposeful innovation. This keynote reimagines teaching and learning ecosystems through the lens of complexity: preparing engineers not just to use AI, but to question, integrate, and shape it within socio-technical systems. By embracing interdisciplinary fluency, inclusive design, and a mindset of curiosity and responsibility, we can nurture engineers capable of leading transformative change across global contexts. In this AI-driven era, let us reimagine engineering education not merely as a pathway to technological advancement—but as a catalyst for cultivating engineers who can build a more just, sustainable, and inspired world.