

KM Conference 2025 25 - 28 June 2025

Department of Information Engineering and Mathematics, University of Siena, Italy Themes: Knowledge Management, Cybersecurity, Learning, and Information Technology https://iiakm.org/conference/

Keynote Lecture

Future Skillsets for Digital Competencies, Cybersecurity, and Human Al Partnerships

Dr. Catherine Neubauer

Research Psychologist and Lead for Technologically Savvy Soldiers Program USARMY DEVCOM Army Research Lab (ARL)

Keynote Overview:

In today's rapidly advancing digital world, the synergy between knowledge management, cybersecurity, learning, and information technology is transforming the human competencies needed for success. This keynote will explore the emerging skills required to effectively engage in digital ecosystems, secure critical information assets, and foster productive human-AI partnerships. As digital transformation reshapes the roles and responsibilities within organizations, individuals must develop a new blend of technical and cognitive skills to stay ahead. Drawing on real-world applications, including projects and examples from academia and defense, this talk will outline potential skillsets for navigating this new landscape. The focus on human-AI partnership, cybersecurity readiness, and adaptive digital skills will enable organizations to effectively harness technology's potential, anticipate future challenges, and achieve their strategic goals in an increasingly complex digital landscape.

About the Keynote Presenter:

Dr. Catherine Neubauer is a Research Psychologist in the Estimating and Predicting Human Behavior Branch in the Humans in Complex Systems Division (HCxS) at the Combat Capabilities Development Command (CCDC) Army Research Laboratory (ARL) and is currently supporting efforts related to Human Autonomy Teaming (HAT) and Technological Fluency. She earned her Ph.D. in Human Factors Psychology from the University of Cincinnati in 2014 under the mentorship of Dr. Gerald Matthews. She was also a 2012 Repperger Research Fellow at Wright Patterson Air Force Base and formerly a postdoctoral fellow at the University of Southern California's Institute for Creative Technologies. Dr. Neubauer's research focuses on the use of cognitive models and algorithms to assess human performance and decision-making within



basic and applied settings. More specifically, her work has focused on autonomous driving, cybernetics, team cohesion, trust in automation, and automatic analysis of human emotion, state, and facial expressivity. Recently, she has spearheaded the launch of a new research program focused on the assessment and enhancement of technological fluency and adaptation. She has published in several major journals and is co-editor of the 2012 Handbook of Operator Fatigue. Her publications can be found at: https://www.researchgate.net/profile/Catherine Neubauer