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Speaker Bio:

Amir Behzadan has received a Ph.D. in civil engineering from the University of Michigan, Ann Arbor (2008). He is the director of the Connected Informatics and Built Environment Research (CIBER) Lab, where researchers aim at investigating grand challenges at the intersection of the society and built/natural environments (including disaster resilience, climate change adaptation, and occupational safety and health) through the design, validation, and dissemination of human-centered, responsible and affordable AI/ML solutions. His research and scholarly activities are supported by the federal government, state agencies, and the private sector. He has delivered a 2022 TEDx Talk on how AI can help communities better understand flood risk. He is a 2009 ASCE ExCEEd fellow and serves on the editorial board of the ASCE Journal of Construction Engineering and Management.

Presentation:

Back to the Future: Emerging Human-Centered AI Applications in Disaster Management

Artificial intelligence (AI) is rapidly becoming an indispensable part of our lives. The AI technology has experienced a significant evolution in recent years that has led to advanced algorithms for processing vast datasets, sophisticated systems capable of predicting human behavior and preferences, and highly convincing content generator tools. In the realm of emergency and disaster management, as we explore practical solutions to mitigate the impacts of climate change on our communities, AI has the potential to serve as a catalyst for innovation. However, the long-term success of this technology is possible only if we overcome key challenges including ethical considerations, algorithmic biases, data privacy,

affordability and scalability, accountability and transparency, and ultimately sustained community trust and buy-in. In other words, for an AI system to be successful, it must adhere to the principles of human-centered design, deployment, and use. This talk will demonstrate recent successful AI use cases developed by CIBER Lab researchers, discuss key enablers of and barriers to the adoption of these tools in emergency and disaster management, and encourage the audience to envision new possibilities where AI can help improve existing workflows and upskill the workforce.