

## Exploring the Impact of Using Artificial Intelligence in Construction Engineering and Management Education and Research

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Artificial intelligence (AI) is restructuring the construction engineering and management (CEM) domain. The emergence of generative AI (GenAI) and large language models (LLMs) has intensified debates in higher education. However, there is limited investigation into the impacts of GenAI on CEM learning and research environments. Existing studies have not examined how students and educators perceive these tools across distinct CEM subject areas. The goal of this paper is to develop a pathway for an integration of GenAI into CEM curricula, and research activities. To that end, a survey was developed to assess the current and future capabilities of LLMs in multiple CEM subject areas as well as their impacts on education and research activities. The findings provide a foundation for CEM programs to develop differentiated AI integration policies that distinguish between formative, summative, and research contexts.



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Islam H. El-adaway, a licensed Professional Engineer (P.E.) in the United States (US) and a registered Chartered Engineer (CEng.) in the United Kingdom (UK), is the tenured Hurst-McCarthy endowed Full Professor within the Department of Civil, Architectural and Environmental Engineering and the Department of Engineering Management and Systems Engineering at Missouri University of Science and Technology (Missouri S&T, formerly known as the University of Missouri - Rolla). At Missouri S&T, he is currently serving as the Associate Provost for Saint Louis Operations after previously serving as the Director of Corporate Education and Associate Dean for Academic Partnerships, respectively. Also, at Missouri S&T, he is the Founding Director of the Missouri Consortium for Construction Innovation (MO-CCI); which is an academic-industry partnership focusing on research, student development, and professional education with members representing major construction stakeholders in Missouri that are top ranked by the Engineering News Record (ENR). He also manages the Civil Infrastructure System of Systems Interdisciplinary Laboratory (CI2SI-L) to mitigate the management challenges associated with construction-related projects. Prior to that, he held tenured positions at the University of Tennessee - Knoxville and Mississippi State University. Dr. El-adaway earned his Ph.D. in Civil Engineering from Iowa State University, and his M.Sc. and B.Sc. in Construction Engineering from the American University in Cairo. Dr. El-adaway worked collaboratively to successfully create from scratch the construction engineering and management (CEM) infrastructure at all his institutions, especially on the research side. His scholarly efforts with his team members resulted in 291 peer-reviewed papers (162 journal papers and 129 conference papers), all of which were published and/or accepted in the most highly regarded journals and highly attended conferences in the CEM specialty area.

**Date**

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04/10/2026

**Location**

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Virtual via Zoom  
(See email for link)

**Time**

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11:30AM -12:20PM