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3:35 PM, Room 204, Caldwell Building

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Validation Criteria for Computationally Intensive Theory Construction

Computationally intensive theory construction (CITC) combines computational techniques with traditional quantitative and qualitative techniques to identify patterns in data and generate theoretical insights from those patterns. While guidelines exist for methodological approaches in CITC, the open-ended and exploratory nature of the genre presents challenges in terms of the validity of inferences drawn from patterns found in data using computational methods. We propose a multi-perspective framework for establishing validity in the CITC process. Specifically, we identify the two validity concerns of pattern specification and fit and the three validity standards of correspondence, coherence, and utility to establish and assess validity when surfacing patterns from data and making inferences based on those patterns to construct theory. We highlight how the three validity standards are not mutually exclusive, how no single standard should take primacy, and how researchers can combine them. This paper contributes to the methodological rigor of CITC research and fosters a supportive scholarly environment for innovation and exploration in the digital era.

Keywords: computationally intensive theory construction, CITC, validity criteria, pattern validity, specification, fit, correspondence, coherence, utility.

About the Speaker

Dr. Hani Safadi is Associate professor at Terry College of Business, University of Georgia. He is interested in online communities, social media, health IT, information systems development, and the application of computational techniques in management research. His research is published in outlets such as MIS Quarterly where he serves as Associate Editor, Information Systems Research, Organization Science, Journal of the Association for Information Systems, and Journal of Medical Internet Research.



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