

Good morning,
You are invited to attend our weekly ECE Graduate Seminar.

Old Dominion University
College of Engineering and Technology
Department of Electrical and Computer Engineering

All lectures to be held at 3:00pm on Fridays online at
https://vs.prod.odu.edu/kvs/interface_webex/?cid=202020_ECE731ECE831VS_94044
For more information, contact Dr. Chung Hao Chen at (757) 683-3475 or email cxchen@odu.edu.

Friday, February 12, 2021 Seminar Topic:

CAN AI ADVANCE CONCEPTUAL MODEL DEVELOPMENT? by Mr. Dave Shuttleworth, PHD
Candidate in the Department of Computational Modeling and Simulation at Old Dominion University

Abstract:

The wide array of descriptions of conceptual modeling across the spectrum from problem identification through simulation specification has led to ambiguity. Current state of the art provides several definitions surrounding conceptualization, conceptual modeling, and specification, and these terms are often used interchangeably. The lack of standard definitions and confounding terms have given rise to many styles of conceptual models in terms of format and content. Several languages and approaches have been utilized to formally express a conceptual model, which are often borrowed from computer science and software engineering. Additionally, using these languages and approaches assume the problem is bounded and well understood. Furthermore, it assumes the modeling participants are familiar in implementing the languages. However, these languages, while formal, are ill-suited for the initial synthesis and expression of a phenomena.

This initial synthesis in developing a model of some phenomena is model conceptualization, and it is conceptualization that provides a basis for conceptual model development. The process of conceptualizing some phenomena using formal, repeatable methods is absent from the practice of conceptual modeling. This presentation summarizes how conceptual modeling is supported by conceptualization and presents a novel approach to model conceptualization.



Bio:

David Shuttleworth is a second year Ph.D. Candidate in the Computational Modeling and Simulation Department at Old Dominion University. He received his Bachelor's in Aerospace Engineering from Auburn University in 2000 and a Master's of Engineering in Aerospace Engineering from University of Virginia in 2010. His research focus is on how artificial intelligence can support the development of conceptual models through natural language. David is employed at Johns Hopkins University, Applied Physics Lab as a Systems and M&S Engineer where he supports the development and modernization of the nation's strategic defense systems.