



enterprise Simulation and Optimization Laboratory

presents

Managing Business Complexity with Agent-Based Modeling and Simulation

Thursday, April 24, 2008
1:30 - 5:30 pm
Methodist Presentation Theater
FedEx Institute of Technology
The University of Memphis

featuring
Dr. Michael J. North



Deputy Director, Center for Complex Adaptive Agent Systems Simulation, Decision and Information Sciences Division, Argonne National Laboratory and a Senior Fellow, Joint Computation Institute of Argonne Lab and the University of Chicago

Applications range from using Agent-Based Modeling and Simulation to model supply chains and logistics systems, to predicting the spread of epidemics and the diffusion of public information, to identifying factors in the fall of ancient civilizations, to understanding contemporary urban conflict, to name a few.

Agent-based modeling and simulation (ABMS) is a recent approach to modeling systems comprised of interacting autonomous agents. ABMS is already having far-reaching effects on the way that business and government use computers to support decision-making. This talk, based on North and Macal's new book "Managing Business Complexity: Discovering Strategic Solutions with Agent-Based Modeling and Simulation," describes the foundations of ABMS, identifies software toolkits and approaches for developing agent models, from spreadsheets to enterprise-scale computer systems, and discusses the relationship between ABMS and traditional modeling techniques, emphasizing the value-add that ABMS provides, along with special challenges pertaining to data and model validation.

- 1:30 pm Tour—FedEx Institute of Technology - Optional -
2:30 pm Welcome
Shaye Mandle
FedEx Institute of Technology
2:40 pm Introduction
Mehdi Amini, Co-Director, eSOL
The University of Memphis
3:00 pm Managing Business Complexity with Agent-Based Modeling and Simulation
Michael J. North
Argonne National Laboratory and University of Chicago
4:00 pm BREAK
4:15 pm OptDiverse™: Innovative Agent-Based Simulation/Optimization Technology to Enhance Workforce Diversity, Capabilities, and Performance
Jay April, Marco Better, Fred Glover, and James Kelly
OptTek Systems, Inc.
Gary Kochenberger
University of Colorado at Denver
5:00 pm Agent-Based Modeling and Simulation: A Frontier Research Approach to the New Product Diffusion
Mehdi Amini, Mohammad Nejad, Emin Babakus, and Dan Sherrell
The University of Memphis
5:30 pm RECEPTION FOLLOWING



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