Research Seminar Series

Monday, 10 April 2006, 2-2:50pm, Broun 238

Simulation-based Testing of Emerging Defense Information Systems

Modeling and simulation methodology is attaining core-technology status for standards conformance testing of information technology-based defense systems. To illustrate, we will discuss the development of automated test case generators for testing new defense systems for conformance to military tactical data link standards. In particular, the DEVS discrete event simulation formalism has proved capable of capturing the information-processing complexities underlying the MIL-STD-6016C standard for message exchange and collaboration among diverse radar sensors. We discuss how the formalism is being in distributed simulation to evaluate the performance of an emerging approach to the formation of single integrated air pictures (SIAP).

Bernard P. Zeigler is Professor of Electrical and Computer Engineering at the University of Arizona, Tucson and co-Director of the Arizona Center for Integrative Modeling and Simulation. In 1995, he was named Fellow of the IEEE in recognition of his contributions to the theory of discrete event simulation. In 2000 he received the McLeod Founder’s Award by the Society for Computer Simulation, its highest recognition, for his contributions to discrete event simulation. In June 2002, he was elected President of the Society (recently, renamed The Society for Modeling and Simulation, International.) Zeigler served on two National Research Council committees to recommend directions for information technology and simulation modeling in the 21st Century and a third NRC committee that developed a book of recommendations on simulation enhancements to systems acquisition and manufacturing.

Bernard P. Zeigler
Arizona Center for Integrative Modeling and Simulation

Reception following in Dunstan Study Lounge