

Simulation and Reality: The Big Picture and Challenges

The talk starts with a challenging view of reality and offers a comprehensive and integrative view of simulation where several seemingly different aspects are reconciled. A comprehensive view of modeling and simulation (M&S) offers the possibilities to tap its full potential and to be thorough in preparing the index of the M&S Body of Knowledge (M&S BoK). The comprehensiveness of the index of the M&S BoK is imperative in:

- (1) designing appropriate M&S curricula and degree programs,
- (2) administering effective professional exams for different types of simulationists at different levels of maturity,
- (3) defining maturity levels of M&S establishments, and
- (4) finalizing the codes of a classification system for M&S industry.

The Code of professional ethics for simulation practitioners and the multilingual M&S dictionary project are also highlighted. Some challenges for the profession are covered in the last part of the talk.



Dr. TUNCER ÖREN is a professor emeritus of Computer Science at the University of Ottawa, in Ottawa, Ontario, Canada. His current research activities include: (1) advanced M&S methodologies such as: multimodels, multisimulation, and emergence; (2) agent-directed simulation; (3) cognitive simulation; and (4) failure avoidance in M&S and user/system interfaces. He has also contributed to Ethics in simulation as the lead author of the Code of Professional Ethics for Simulationists, M&S Body of Knowledge, and multilingual M&S dictionaries including ontology-based systematic M&S dictionaries.

He has over 400 publications (some translated to Chinese, German and Turkish). His last book (co-edited with Dr. Levent Yilmaz) is titled: "Agent-Directed Simulation and Systems Engineering" (Wiley-Berlin). Dr. Ören has been active in over 370 conferences and seminars held in about 30 countries.

He is the founding director of the M&SNet of SCS. He has been a member of the Board of Directors of SCS for several terms and served in numerous committees. He received "Information Age Award" from the Turkish Ministry of Culture, Distinguished Service Award from SCS, and plaques and certificates of appreciation from organizations including ACM, AECL, AFCEA, and NATO. Dr. Ören is recognized by IBM Canada as a Pioneer of Computing in Canada (2005). His home page is at: <http://www.site.uottawa.ca/~oren/>