

SPRINGSIM'19

2019 Spring Simulation Conference

AIMS AND SCOPE

The Modeling and Simulation in Medicine (MSM) track addresses topics in medical simulation and some of the dramatic increases in the deployment of simulation-based techniques in medicine and its related healthcare fields. Simulation scenarios are extensively used for training of medical personnel, students, first responders, and emergency response coordinators. Rapid advances in computer technologies, biomedical and systems engineering, drive the development of cyber physical systems that serve as simulation based training platforms. Such integrated engineering techniques are also the basis for design and development of new embedded medical devices whose reliability and cybersecurity is paramount for the well-being of patients. In addition, very complex models “digitally” plan pharmaceutical studies, assess potential treatment modalities, and carry out analytics on big health related data sets. It is clear that we need to strengthen methodological and theoretical foundations in order to provide integrated, connected, and crosscutting solutions for modeling and simulation in healthcare. The MSM track attempts to unify themes for such solutions and to “connect” researchers, developers, and medical practitioners. Additionally, papers describing design principles as well as applications pertinent (but not limited) to the following topics are also welcome:

- Modeling and simulation in medicine: fundamental research
- Training and education
- Care delivery, outcomes, and patient’s safety
- Robotics and its applications in training and “in vivo”
- Life-critical systems
- Cyber-security of medical IT systems and embedded devices
- Systems integration: “connected health”