

SPRINGSIM'20

2020 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. The past decade has brought about a dramatic increase in the deployment of simulation-based techniques in medicine and its related healthcare fields. We use simulation scenarios extensively 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 and scientific methods are also the basis for design and development of new medical devices whose reliability, safety, and cybersecurity are 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 cross-cutting solutions for modeling and simulation in healthcare. This meeting will unify approaches for such solutions and “connect” researchers, developers, and medical practitioners in an attempt to further advance the simulation modeling agenda in medicine. Topics of interest include, but are not limited to:

- 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
- Systems integration: “connected health”
- Cybersecurity of medical IT systems and devices
- Data science for health predictive analytics