

# SPRINGSIM'19

2019 Spring Simulation Conference

## AIMS AND SCOPE

The High Performance Computing (HPC) track is devoted to the impact of large-scale and distributed computing and communications on simulations. Advances in novel and heterogeneous architectures, high-end computers, large data stores are ushering in a new era of high performance parallel and distributed simulations. Along with these new capabilities come new challenges in computing and system modeling. The goal of HPC 2019 is to encourage innovation in high performance computing and communication technologies and to promote synergistic advances in modeling methodologies and simulation. It will promote the exchange of ideas and information between universities, industry, supercomputing centers, and national laboratories about new developments in system modeling, high performance computing and communication, scientific computing as well as simulation. Additional pertinent topics related to HPC (but not limited) to the following are welcome:

- High Performance Computing issues in Big Data analytics
- High Performance/large-scale application case studies
- The use of GPUs for general-purpose computations (GPGPU)
- Accelerator and co-processor computing; multicore and many-core computing
- Exascale challenges
- Power-aware computing
- Cloud, distributed, and grid computing
- Asynchronous numerical methods and programming
- Hybrid system modeling and simulation
- Hybrid parallel or distributed algorithms
- Large-scale visualization and data management
- Tools and environments for coupling parallel codes
- Parallel algorithms and architectures
- High performance software tools and techniques
- Resilience at the simulation level
- Reproducibility of application performance results