BIO-MEDICAL AND POPULATION MODELING (BMPM'17)

TRACK CHAIRS

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AIMS AND SCOPE

We are seeking submissions for presentation in Bio-Medical and Population Modeling. Topics include computational work related to biology, healthcare, surgery, dentistry, mental health, pharmaceuticals, health economics, medical education or bioinformatics.

Shorter papers briefly and concisely describing the work will be preferred. Authors with supplementary material such as short online video or open source software implementation will gain special positive attention.

Non-blind, public, open review will be used to provide feedback for papers in this track. The review process is intended to discuss and improve the papers with reviewer feedback.

TOPICS

Specific examples of desired submissions include but are not limited to:

- Software applications and medical device applications that include computational models
- Virtual Reality applications for surgery or education for nurses/doctors
- Population Modeling of all kinds, including predictive modeling, disease models, emergency response models and behavior models
- Modeling for medical training, including virtual patient and mannequin models
- Numerical simulation for skeletal and organ modeling, including finite elements, finite differences, Computational Fluid Dynamics (CFD) and computational dynamics
- Model-sharing standards for Bio-Medical purposes, including SBML and PharmML
- Statistical models, including Monte Carlo simulations and clinical information processing
- Haptic feedback applications for education, training and *in vivo* procedures
- Machine vision for model extraction from CT/MRI/ultrasound images or other 2D/3D scanning devices
- 3D printing applications
- Molecular computational modeling for pharmaceutical purposes
- High Performance Computing (HPC) and Big Data applications, including cloud-computing solutions
- Machine learning and evolutionary computation for modeling medical data
- Natural Language Processing (NLP) related to Bio-Medical data
- Multi Scale Modeling for healthcare
- EHR/EMR related computational modeling
- Bio-Medical model validation

SUBMISSION GUIDELINES

Initial size of submitted papers can be as short as 3 pages, similar to an extended abstract. Papers are expected to grow in size during the public, non-blind review process. Papers should be submitted through the following link: https://www.softconf.com/sim/SCSC17/