

Annual BSEC Conference at the Oak Ridge National Laboratory Collaborative Biomedical Innovations

https://www.ornl.gov/bsec_conferences/2013

The Biomedical Science and Engineering Center at ORNL announces its annual conference on Collaborative Biomedical Innovations. The central theme of the 2013 BSEC Conference is **“Integrating Experiments, Simulations and Modeling for Biomedical Advances: From Single Molecules to Public Health Dynamics.”** From studying individual molecular events to modeling how diseases spread within heterogeneous populations, there is an increasing need to integrate information from disparate sources, high through-put experiments to large-scale computational simulations, multi-modality patient data, and other data sources including social media and crowd-sourcing. Mathematical modeling and computational analysis are indispensable in understanding spatiotemporal behaviors of complex biomedical systems operating at multiple scales. Bringing together researchers from disparate scientific disciplines and organizations is essential to gaining novel insights and to proposing innovative solutions to the theoretical, methodological, analytical, and translational problems of such challenging knowledge discovery undertakings. The conference will cover both basic research and translational aspects with special emphasis on the critical role of interdisciplinary collaborations.



Specific topics of interest include but not limited to:

- Tools and algorithms for modeling and simulation of biological processes, tissues, organs, and patient dynamics;
- Devices and technologies for multi-scale model development and validation;
- Methods for multi-scale, multi-source data integration, visualization and predictive modeling of biological processes, diseases, population behaviors, and clinical outcomes;
- High-performance computing aspects of problem-driven biomedical modeling and simulation methods;
- Biological, biomedical, behavioral, epidemiological, and clinical applications of multi-scale modeling and simulation.

Extended abstracts in a 2-page IEEE short paper format are invited for submission. To submit, follow the link: https://www.ornl.gov/bsec_conferences/2013/author_toolkit.shtml. Conference content will be submitted for inclusion into IEEE Xplore as well as other Abstracting and Indexing (A&I) databases.

Important Deadlines:

- **Submission Deadline for 2-page Extended Abstract:** **March 15, 2013**
- **Notification of Acceptance:** **March 29, 2013**
- **Submission of Camera-Ready 4-page Manuscript:** **April 26, 2013**
- **Registration Deadline:** **Non-US citizens – April 10, 2013**
US citizens – May 6, 2013

Registration Costs:

All conference attendees from outside the DOE Oak Ridge complex: \$220.00
ORNL, Y12, ORAU, DOE-ORO Employees, Students: \$150.00