



Free WiFi is available to conference attendees in the meeting space.

**SB3C 2015 WiFi Access**

**Network name:** SB3C2015

**Password:** sb3c2015

## SB<sup>3</sup>C 2015 Program Changes & Errata

### Wednesday, June 17

#### Podium Sessions

6:45 pm (pg. 27) **Towards The Validation of a Multiscale Chemo-Electro-Mechanical Finite Element Model Using Electromyography**  
cancelled SB<sup>3</sup>C2015-475. Thomas Heidlauf, Mylena Mordhorst, **Sook-Yee Chong**, Oliver Röhrle, University of Stuttgart, Germany

### Thursday, June 18

#### Poster Session 1

Poster no.

137 **Patient-specific Treatment Of Intracranial Aneurysms: An Automatic CFD-based Flow-diverter Optimization Principle**  
added SB<sup>3</sup>C2015-265. **Philipp Berg**<sup>1</sup>, László Daróczy<sup>1</sup>, Oliver Beuing<sup>2</sup>, Gábor Janiga<sup>1</sup>, <sup>1</sup>University of Magdeburg, Magdeburg, Germany, <sup>2</sup>University Hospital Magdeburg, Magdeburg, Germany

159 (pg. 51) **Optimization of Test Methods and Burst Property Characterization of Alginate Hydrogel Lung Sealants**  
author change SB<sup>3</sup>C2015-630. Patrick N. Charron, **Spencer L. Fenn**, Rachael A. Oldinski, University of Vermont, Burlington, VT, US

### Friday, June 19

#### Podium Sessions

11:00 am (pg. 56) **PhD Competition - Mechanics of Injury and Repair**  
chair info Session Chair is **Ramesh Ragupathy**, Medtronic Inc., Minneapolis, MN, United States

3:45 pm (pg. 72) **Patient-specific Treatment of Intracranial Aneurysms: An Automatic CFD-based Flow-diverter Optimization Principle**  
moved SB<sup>3</sup>C2015-265. **Philipp Berg**<sup>1</sup>, László Daróczy<sup>1</sup>, Oliver Beuing<sup>2</sup>, Gábor Janiga<sup>1</sup>, <sup>1</sup>University of Magdeburg, Magdeburg, Germany, <sup>2</sup>University Hospital Magdeburg, Magdeburg, Germany  
Moved to Thursday Poster Session 1, Poster No. 137

replaced by **Stability Analysis of the Continuum Constrained Mixture Model for Vascular Growth and Remodeling**  
SB<sup>3</sup>C2015-1096. **Jiacheng Wu**, Shawn C. Shadden University of California, Berkeley, Berkeley, CA, United States

#### Poster Session 2

Poster no.  
220 (pg. 61) **Integration of a Spontaneous Respiratory Driver with Blood Gas Feedback into Biogears, an Open-source, Whole-body Physiology Model** SB<sup>3</sup>C2015-327. Yeshitila Gebremichael, Rachel Clipp, **Jeffrey Webb**, Aaron Bray, Cameron Thames, Zack Swarm, Jennifer Carter, Jeremiah Heneghan, Applied Research Associates, Inc., Raleigh, NC, United States  
author change

234 (pg. 62) **Treatment of Focal Cartilage Defects Using a Metal Implant: New Biomechanical Insights Using Finite Element Modeling** SB<sup>3</sup>C2015-361. Ashley Heuijers, Wouter Wilson, Keita Ito, **Corrinus C. van Donkelaar**, Eindhoven University of Technology, Eindhoven, Netherlands  
author change

257 (pg. 64) **A Computational Model of Blast Loading to the Eye: A Comparison with Field Tests**  
author change SB<sup>3</sup>C2015-481. **Bahram Notghi**<sup>1</sup>, Thao D. Nguyen<sup>1</sup>, Rajneesh Bhardwaj<sup>2</sup>, Shantanu Bailoor<sup>2</sup>, <sup>1</sup>Johns Hopkins University, Baltimore, MD, United States, <sup>2</sup>Indian Institute of Technology Bombay, Mumbai, India

299 (pg. 67) **Stability Analysis of the Continuum Constrained Mixture Model for Vascular Growth and Remodeling**  
moved SB<sup>3</sup>C2015-1096. **Jiacheng Wu**, Shawn C. Shadden, University of California, Berkeley, Berkeley, CA, United States  
Poster moved to Vascular Remodeling and Stented Flow Session on Friday 3:45 pm in Magpie

301 (pg. 67) **Aortic Peak Stress Induced By Antihypertensive Medications In Aortic Dissection Patients**  
author change SB<sup>3</sup>C2015-552. **Vittoria Flamini**<sup>1</sup>, Simon Gallot Lavallée<sup>2</sup>, Zed P. Lucienne<sup>1</sup>, Scott Maddalo<sup>3</sup>, Abe DeAnda<sup>3</sup>, and Boyce E. Griffith<sup>4</sup>, <sup>1</sup>New York University, New York, NY, United States, <sup>2</sup>Imperial College, London, UK, <sup>3</sup>NYU Langone Medical Center, New York, NY, United States, <sup>4</sup>University of North Carolina at Chapel Hill, Chapel Hill, NC, United States

### Saturday, June 20

#### Workshops

11:30 am - 1 pm **Critical Steps in Composing a Successful Mentorship Plan** changed to **Funding Mechanisms for Early-Stage Investigators**  
program change (pg. 10 & 74) Primrose A  
Many of the SB<sup>3</sup>C attendees are graduate students, post-doctoral trainees, and faculty members who are at the early stages of their careers. As specific funding mechanisms are often available for these groups of investigators, the purpose of this workshop is to provide an overview of such opportunities. In addition to the research proposals, many of the early-stage grants require plans for career development and mentorship. During this workshop, two adroit participating members of SB<sup>3</sup>C, who have been involved in the review process of such grants, and two representatives from NIH and NSF will share their first-hand knowledge and experience with the audience. The workshop will be held in two segments. The first segment includes two 20-minute seminars

## SB<sup>3</sup>C 2015 Program Changes & Errata Cont.

**Saturday, June 20**

### Workshops

*presented by the NIH and NSF representatives. They will provide an overview of funding mechanisms for the early-stage investigators in their representative agencies. For the remaining 25 minutes of the workshop, two experienced participating members of SB<sup>3</sup>C will talk about how key aspects of these grants are reviewed and will share their own effective strategies for planning career development and mentorship components. Participants in this workshop will have an excellent opportunity to learn about critical elements necessary for a successful grant proposal and to ask questions from the experienced reviewers and funding agencies representatives.*

11:30 am - 1 pm  
itinerary update

#### **Experimental & Computational Frameworks for Biotransport in Tumors** (pg. 12 & 74) Maybird

*The biotransport characteristics of the tumor microenvironment are constantly evolving during tumor development and provide both opportunities and challenges for therapeutic intervention. In order to develop effective cancer treatments, a thorough understanding of the biotransport properties of tumors as a function of their growth and how these characteristics influence therapy outcome are critical. This workshop will provide key insights which will be useful for controlling biotransport within the tumor microenvironment.*

11:30 am - 12 pm **The Use of Inorganic Nanoparticles for Imaging, Drug Delivery and Focal Therapy in Tumors**, John Bischof, University of Minnesota

12:05 – 12:20 pm **Nanotheranostics in the Tumor Microenvironment**, M. Nichole Rylander, University of Texas

12:25 - 12:40 pm **Microfluidic Isolation of Circulating Tumor Cell Clusters: Analysis and Implications for Treatment**, Shannon Stott, Harvard Medical School

12:45 – 1:00 pm **MR-Based Models that Capture Heterogeneous Tumor Delivery**, Malisa Sarntinoranont, Univ. Florida

1:00-1:30 pm Panel Discussion



### Sponsor Update

The 2015 Summer Biomechanics, Bioengineering and Biotransport Conference (SB<sup>3</sup>C) organizers gratefully acknowledge the further support of the National Science Foundation GARDE program (Award number 1543809).

### New Academic Sponsor

#### **Department of Bioengineering at the University of Utah**



### **A Closely Knit Community**

Nestled into Utah's Wasatch Mountain range, the Department of Bioengineering's new home (foreground) is located between the University Hospital & School of Medicine (upper left) and the College of Engineer Campus (just to the right out of frame) providing a clinically immersive engineering experience that is unique among BME training programs. Did you know that the Department of Bioengineering is one of the oldest and yet fastest growing Biomedical training programs in the nation. We rank 7th nationally in median h-index for core faculty as determined by google scholar. With over 125 faculty our research strengths span every niche of Clinical medicine. Not to mention that we are surrounded by unprecedented natural beauty.

Learn more about us at: <http://www.bioen.utah.edu/>

