Dear Members, Colleagues, and Friends of CyBHOR:

Greetings! 2017 has been an exciting year so far. We've had many opportunities to connect with current and future industry members, developed stimulating directions for our research and showcased the center’s work in numerous venues. We look forward to the second half of 2017 as we prepare the center to become a phase II I/UCRC.

Recent Events

Spring 2017 IAB Meeting
On April 12th & 13th the center convened for the NSF I/UCRC CyBHOR Industry Advisory Board meeting at Houston Methodist. The meeting brought together many of the center’s surgeons, researchers, trainees and industry members to drive research and innovation with high potential of positive impact in the Hospital Operating Room. As in prior years, the meeting provided the opportunity for insightful conversations on the many projects within CyBHOR.

SXSW 2017
On March 12th CyBHOR hosted a Meet Up at SXSW in Austin, TX titled: The Value of Multiscale Modeling in Healthcare. Drs. Aman and Kallhoff welcomed over 20 individuals from various fields in healthcare to discuss the benefits of multiscale, multidisciplinary approaches to drive innovation in healthcare.

Upcoming Meetings/Events

Fall IAB Meeting
Host: University of Florida
Date: October 4 & 5, 2017
Location: Gainesville, FL

Grande Challenge Planning Meeting
CyBHOR & CHOT: Access to Appropriate Cancer Care for All Americans
Host: CHOT and CyBHOR
Date: November 7, 2017
Location: Houston Methodist, Research Institute

Publications, Grants & Awards

Presentation: Hemodynamics inside the MonaLSA stent graft, oral presentation at BMES/FDA Frontiers in Medical Devices 2017 Conference.
**Poster:** Hemodynamic consequences of different designs of the MonaLSA stent graft; Summer Biomechanics, Bioengineering, Biotransport Conference (SB3C) 2017.


**Paper:** Vascular Adaptation: Pattern Formation and Cross Validation between an Agent-Based Model and a Dynamical System. Marc Garbey, Stefano Casarin, and Scott Bercel. To be published in Journal of Theoretical Biology.

**Paper:** Measuring Mental Work Load with EEG + fNIRS. Haleh Aghakani, Marc Garbey and Ahmet Omurtag. To appear in Frontiers in Human Neuroscience.

**Best Paper Award:** Linking Gene Dynamics to Intimal Hyperplasia – A Predictive Model of Vein Graft Adaptation. Stefano Casarin. ICBES’17.

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**Graduations**

Toan Nguyen received his PhD from University of Houston in December 2016. His thesis is titled “A computational image-based guidance system for precision laparoscopy”.

Hao Liu received his MS from University of Florida in December 2016. The title of his thesis is “Fistula Maturation Modeling: Effect of Paclitaxel”.

Stefano Casarin received his PhD from University of La Rochelle in June 2017. The title of his thesis is “Mathematical Models in Computational Surgery”.

Guillaume Joerger received his PhD from University of La Rochelle in June 2017. His thesis is titled "Multiscale Modeling and Event Tracking Wireless Technologies to improve efficiency and safety of the surgical flow in an OR suite”.

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**Research Highlights**

Albert Huang, MD received the Top Innovation Award in Emerging Technologies from SAGES in March 2017. Dr. Huang spent part of his residency with CyBHOR, and developed technology during that time to start Allotrope Medical focusing on safe and efficient intra-operative identification of the ureters.

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**Future Directions of CyBHOR**

The team around Rafael Davalos and Abby Whittington at Virginia Tech submitted a planning grant application to join CyBHOR as an academic site.

CyBHOR is in year 5 of the NSF I/UCRC grant and is preparing the phase II application!

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**Contact Information and Submissions for Future Newsletters:**

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