

IDEAS™ (*I*nnovation, *D*esign, and *E*merging *A*lliances in *S*urgery)

Opportunities and Challenges in Surgical Robotics

Saturday April 21, 2012, 7:30 AM - 4 PM

Roberta and Stephen R. Weiner Department of Surgery

Carl J. Shapiro Simulation and Skills Center at

Beth Israel Deaconess Medical Center, Boston, Mass.

7:30–8:15 AM

Breakfast

8:15–8:30 AM

Introduction (Henrik Christensen, PhD, and Elliot Chaikof, MD, PhD)

8:30-9 AM

KEYNOTE SPEAKER: Henrik Christensen, PhD (Georgia Tech); Robotics, Science, and Society: Views from Washington

9–10:30 AM

SESSION 1: Emerging Technologies in Surgical Robotics

Katherine Kuchenbecker, PhD (University of Penn)* Haptic Systems in Surgical Robotics

Howard Choset, PhD (Carnegie Mellon University)* Merging Laparoscopic and Robotic Surgery

George Whitesides, PhD (Harvard University) * Soft Robotics

10–10:30 AM

Roundtable discussion

10:30–10:45 AM

Break

10:45 AM–12:45 PM

SESSION 2: Human-Machine Systems

Gregory Dumanian, MD (Northwestern)* The Myoelectric Prosthetic Interface

Richard F. Weir, PhD (University of Colorado)* Biomechatronics

Neville Hogan, PhD (MIT)* Human Performance-Enhancement Technologies

12:15–12:45 PM

Roundtable discussion

12:45–1:30 PM

Buffet Lunch

1:30–3:30 PM

SESSION 3: Robotics in Practice: Realizing Clinically Meaningful Advances

Gregory Hager, PhD (Johns Hopkins)* The Language of Surgical Robotics

Herbert Zeh, MD (University of Pittsburgh)* Advanced Techniques in GI Robotic Surgery

Li-Ming Su, MD (University of Florida, Gainesville)* Image-Guided Robotic Urologic Surgery

3–3:30 PM

Roundtable discussion

3:30-4 PM

Discussion on Possible Future Opportunities/Avenues

REGISTRATION: *There is no charge for this symposium. To register, please email: mnfrank@bidmc.harvard.edu. We will send a confirmation and directions.*