

Dr. Carla Pugh

"Improving performance of medical trainees with wearables, haptics and analytics."

Abstract: In surgery, it is accepted that there may be a ten to twenty-year learning curve to reach mastery for certain procedures. Dr. Pugh and her research team at the Technology Enabled Clinical Improvement (T.E.C.I.) Center believe this timeline can and should be shortened to improve patient care. This talk will explore how the use of wearable sensor and motion-tracking technologies can enable the measurement of hands-on performance in clinical procedural skills. Dr. Pugh will describe the data collection and analysis techniques that are used in haptic-enabled simulation environments to assess intra-operative judgement of medical trainees.

Bio: Carla Pugh, MD, PhD, FACS is a Professor of Surgery at Stanford University School of Medicine and the Director of the Technology Enabled Clinical Improvement (T.E.C.I.) Center. Her clinical area of expertise is Acute Care Surgery. She is reported to be the first surgeon in the United States to obtain a PhD in Education and her goal is to use technology to change the face of medical and surgical education. Her research involves the use of simulation and advanced engineering technologies to develop new approaches for assessing and defining competency in clinical procedural skills. Dr. Pugh holds three patents on the use of sensor and data acquisition technology to measure and characterize hands-on clinical skills. Currently, over two hundred medical and nursing schools are using one of her sensor enabled training tools for their students and trainees. She is considered to be a leading, international expert on the use of sensors and motion tracking technologies for performance measurement.