Health Engineering Applications Laboratory (http://heal.asu.edu)
Student and ASU Community Seminar
Monday, April 8, 2013, noon-1pm
Cooley Ballroom A

Title: The Bioengineering Initiative at Children’s National Medical Center: Device Development for the Pediatric Environment

Kevin Cleary, PhD
Technical Director, Bioengineering Initiative
Sheikh Zayed Institute for Pediatric Surgical Innovation
Children’s National Medical Center
Washington, DC, USA

This talk will give an overview of the recently established Bioengineering Initiative in the Sheikh Zayed Institute for Pediatric Surgical Innovation at Children's National Medical Center, Washington, DC, USA. The mission of the Bioengineering Initiative is to serve as an engineering research for the hospital and work with clinical partners to develop technology for minimally invasive interventions. The technology developments include medical devices, medical robotics, image registration and fusion, and image-guided navigation for pediatric interventions. The clinical applications include laparoscopic abdominal surgery, knee arthroscopy, craniosynostosis, ureteroscopy, and cochlear implant surgery. The institute includes scientists, radiologists, and surgeons that are dedicated to improving the precision and decreasing the invasiveness of pediatric procedures. The talk will provide incite into the growing field of technology applications in medicine, which open exciting doors for students.

Robotically assisted endoscopy (ureteroscopy) for minimally invasive exploration of the kidney | da Vinci robotic surgery at Children’s National Medical Center

BIOGRAPHY

A research professor and engineer, Kevin Cleary, PhD, leads the Institute's interdisciplinary bioengineering team with a focus on improving visualization in pediatric surgery through medical devices and robotics. As part of that work, he will modify devices designed for adult surgery to work better in the smaller bodies of children. Embracing the unprecedented opportunity to work side by side with physician researchers and other engineers, Dr. Cleary seeks to expand and improve the application of robotics and other devices in pediatric surgery. Dr. Cleary believes the fledgling field of pediatric robotics can advance faster thanks to the unique multidisciplinary set up of the Institute. Dr. Cleary was previously at Georgetown University Medical Center's Department of Radiology where he was director and professor at the Imaging Science and Information Systems Center. He is the co-editor of the book Image-Guided Interventions: Technology and Applications. Dr. Cleary received his doctorate from the University of Texas in Austin and was an NSF-sponsored post-doctoral fellow in robotics in Japan.