

Distinguished Medical Engineering Seminars

February 13, 2014 • 4:10 – 5:10 pm • 105 Annenberg

followed by 30-minute social and refreshments

Innovation: Fetal Surgery to Pediatric Device Consortium

The Pediatric Device Consortium (PDC) has served for 4 years as a platform for open brainstorming, creating solutions through a multidisciplinary approach, and completing the cycle of device innovation from concept to commercialization. The consortium's twice weekly meetings afford a venue for iteration of its 13 active projects and support for people with new ideas at any stage of development. These meetings are a sounding board for potential devices, project updates, and future directions. The interactive web portal provides resources for education, collaboration, and communication. The organization consists of a program administrator, principal investigators, partner programs, and specialists in product development, regulatory affairs, and intellectual property. Residents, engineers, and students from a variety of disciplines work on physical devices and are surrounded by a diverse technological pool. The model of the PDC has contributed to over 30 pediatric devices, with 3 projects in the clinical stages and one commercially available device. Research has been published in 15 peer-reviewed medical and engineering journals and presented at over 20 conferences. Meetings attract 12-20 people on average from different backgrounds. The PDC has raised more than \$11 million as an impressive return on the Food and Drug Administration's \$2 million investment.



Michael R. Harrison

Director of the UCSF Pediatric Device Consortium

Dr. Michael Harrison is Professor of Surgery, Pediatrics, and Obstetrics, Gynecology and Reproductive Sciences, Emeritus. He is a cum laude graduate of Yale University, who received his M.D. magna cum laude from Harvard Medical School, before going on to general surgical residency training at the Mass General, and finally pediatric surgery fellowship at the Rikshospitalet in Oslo, Norway and Children's Hospital of Los Angeles. Acknowledged around the world as the "Father of Fetal Surgery," Dr. Harrison is internationally renowned for his expertise and innovation in pediatric and fetal surgery. He was one of the original founders of the International Fetal Medicine Surgery Society, the founder/director of the UCSF Fetal Treatment Center, and now the Director of the UCSF Pediatric Device Consortium. Dr. Harrison is author of more than 400 hundred peer-reviewed articles and several textbooks including three editions of *The Unborn Patient: The Art and Science of Fetal Therapy*. As a member of various medical and surgical professional societies, he has been recognized by his colleagues for his contributions to the field and honored with a number of prestigious awards, including the American College of Surgeons Jacobson Innovation Award, as well as

membership into the Institute of Medicine. Recently Dr. Harrison served as the 2009 President for the American Pediatric Surgical Association. He maintains an active research lab, which is currently focused on medical device innovation, development and commercialization, and he is the recipient of one of only three FDA Pediatric Device Consortia grants awarded this past year under the Federal Recovery Act. Dr. Harrison and his wife Gretchen maintain both a residence in the San Francisco Bay Area, and an olive grove in California's Mendocino County.