

# Engineering for Children's Health



## Symposium Agenda

May 17, 2018 - Mission Bay Conference Center, San Francisco, CA

**8:00 – 8:30** | **Registration & Breakfast**

**8:30 – 8:45** | **Opening Remarks**

**Hanmin Lee, MD** | *Surgeon-in-Chief, UCSF Benioff Children's Hospital, Professor & Chief, UCSF Division of Pediatric Surgery*

**Bertram Lubin, MD** | *Associate Dean of Children's Health, UCSF*

### **Part I** **Fetal Therapy & Diagnostic Technologies**

**8:45 – 9:00** | **Maternal Fetal Rejection in the Pathogenesis of Preterm Labor**

**Tippi MacKenzie, MD** | *Associate Professor, UCSF Division of Pediatric Surgery*

**9:00 – 9:15** | **Prenatal Diagnosis to Improve Infant Outcomes**

**Mary Norton, MD** | *Professor, UCSF Department of Obstetrics, Gynecology & Reproductive Sciences*

**9:15 – 9:30** | **Acoustic Based Digital Bio-Markers for Asthma and Pneumonia Assessment**

**Aaron Kornblith, MD** | *Assistant Clinical Professor, UCSF Departments of Emergency Medicine & Pediatrics*

**Adam Rao** | *MD/PhD candidate, UCSF, Founder, Tabla*

**9:30 – 9:45** | **Trans-Abdominal Fetal Oximetry for Labor and Delivery**

**Neil Ray, MD** | *Founder & CEO, Raydiant Oximetry, Inc.*

**Mark Rosen, MD** | *Professor Emeritus, UCSF Department of Anesthesia, Chief Medical Officer, Raydiant Oximetry, Inc.*

**9:45 – 10:15** | **Break & Demos\***

### **Part II** **Device Solutions for Kids**

**10:15 – 10:30** | **Exoskeletons for Pediatric Mobility Disorders**

**Homayoon Kazerooni, PhD** | *Professor, UC Berkeley Department of Mechanical Engineering*

**10:30 – 10:45** | **Engineering Nanoscale Materials for Therapeutic Delivery**

**Tejal Desai, PhD** | *Professor & Chair, UCSF Department of Bioengineering & Therapeutic Sciences*

**10:45 – 11:00** | **Safer ECLS Through Engineering**

**Peter Oishi, MD** | *Associate Professor, UCSF Department of Pediatrics*

**11:00 – 11:15** | **Neocare Peritoneal Dialysis Machine**

**Paul Brakeman, MD, PhD** | *Associate Professor, UCSF Department of Pediatrics*

**11:15 – 11:30** | **Innovation in Dialysis Access**

**Shant Vartanian, MD** | *Assistant Professor, UCSF Division of Vascular & Endovascular Surgery*

11:30 – 12:45	<b>Design Workshop: The Pediatric Patient Experience</b> The Better Lab		
12:45 – 1:30	<b>Lunch &amp; Demos*</b>		
	<b>Part III AR/VR &amp; Emerging Technologies</b>		
1:30 – 1:45	<b>Emerging Molecular-MRI Approaches for Non-Invasive Multiplex Tissue Characterization</b> Moriel Vandsburger, PhD   <i>Assistant Professor, UC Berkeley Department of Bioengineering</i>		
1:45 – 2:00	<b>Magnetic Particle Imaging as a Non-Invasive Method for Early Detection of Gut Bleeds, Pulmonary Embolisms, Stroke, Atherosclerosis, and Cancer</b> Steve Conolly, PhD   <i>Professor, UC Berkeley Departments of Bioengineering &amp; Electrical Engineering &amp; Computer Sciences</i>		
2:00 – 2:15	<b>Exploring New Augmented Reality Solutions for Children’s Healthcare</b> Allen Yang, PhD   <i>Executive Director, UC Berkeley Center for Augmented Cognition</i>		
2:15 – 2:30	<b>Virtual Reality for Pediatric Oncology Procedures, Sickle Cell Disease Pain, and MRI Preparation</b> Simon Robertson   <i>Founder &amp; Lead VR Developer, KindVR</i>		
2:30 – 2:45	<b>A Bioartificial Pancreas for Type 1 Diabetes Treatment</b> Shuvo Roy, PhD   <i>Professor, UCSF Department of Bioengineering &amp; Therapeutic Sciences</i>		
2:45 – 3:30	<b>Break &amp; Demos*</b>		
	<b>Part IV Panel Discussion</b>		
3:30 – 4:15	<b>Incentivizing Pediatric Device Development</b> Michael Billig   <i>Co-Founder &amp; CEO, Experien Group</i> Andrew Cleeland   <i>CEO, Fogarty Institute for Innovation</i> Donna Ferriero, MD, MS   <i>Professor, UCSF Department of Pediatrics</i> Michael Harrison, MD   <i>Professor Emeritus, UCSF Departments of Surgery, Pediatrics, Obstetrics, Gynecology &amp; Reproductive Sciences</i> Robert Matheny, MD   <i>Co-Founder, Director &amp; Chief Medical Officer, CorMatrix Cardiovascular, Inc.</i> Vasum Peiris, MD, MPH   <i>Chief Medical Officer, Pediatrics &amp; Special Populations, FDA Center for Devices &amp; Radiological Health</i>		
	<b>Part V Closing Keynote</b>		
4:15 – 5:00	<b>Aligning Innovation for Pediatric Public Health</b> Vasum Peiris, MD, MPH   <i>Chief Medical Officer, Pediatrics &amp; Special Populations, FDA Center for Devices &amp; Radiological Health</i>		
5:00 – 6:00	<b>Cocktail Hour</b>		
<b>*Demos by:</b>	Asphyxi-Alert KindVR Tabla	Breastfeeding Appliance Piccolo Medical UCSF Pediatric Device Consortium	Gravitas Medical SuitX Exoskeletons UC Berkeley-UCSF MTM program