Wireless Health 2013
November 1-3, 2013
Johns Hopkins University
Baltimore, MD

Conference Report
Collaborative Workshops on Funding, Regulation, and Design

The event began on Friday with a day of pre-conference workshops that covered funding opportunities, regulatory issues, and product design and development. Workshop topics included:

- Getting Support for Your Research: Wendy Nilsen of NIH and Misha Pavel of NSF provided information on funding options at the agencies and gave participants the opportunity to discuss their ongoing projects. Attention was also given to collaborative research with other institutions and with industry.
- The Changing Regulatory Environment: Bakul Patel, who serves as Senior Policy Advisor to the Center Director at the FDA, led this workshop which included a brief overview on recent developments at the FDA, presentation of illustrative case studies, and a moderated discussion.
- The Repository for Algorithm Development for Activity Research (RADAR): a working group on the development of large, well-characterized datasets from mobile health devices, spearheaded by NCI.
- Design Thinking & Wireless Health: IDEO hosted a design challenge in which participants had an opportunity to advance their ideas while learning IDEO’s unique process for design innovation.

Keynotes & Conference Highlights:

Dr. Deborah Estrin, Professor of Computer Science at the new Cornell Tech campus in New York City and co-founder of the non-profit startup, Open mHealth, opened the conference sessions on Friday evening. Her keynote speech on “Small, n=me, Data” focused on the ability of mobile health devices to capture personalized, evidence-based data about behaviors and outcomes, and the challenges and benefits of making sense of this data. A panel discussion on Human-Computer Interface Design and Evaluation touched on similar topics, offering insight into patient centric design for health promotion and health management tools. Dr. Peter Tippett, Verizon CMO, described the company’s design for a platform that enables connected personal health and healthcare services. From the clinical side, Dr. Michael Roizen, Chief Wellness Officer & Institute Chair at Cleveland Clinic, offered an aspirational view of how patients can take charge of their own health if provided with supportive connected health tools.

Dr. Alain Labrique of Johns Hopkins University’s Global mHealth Initiative led a panel on recent achievements in global health. Panelists, including Patricia Mecheal of the mHealth Alliance, discussed areas where innovation is needed to fill gaps, particularly with respect to maternal and child health. Bert GySELINCK, General Manager at Holst Center/imec, also presented his vision for the advances that are needed to push the field of connected health forward. He encouraged collaboration between academia and industry to identify true needs and develop useful solutions, highlighting ongoing research in wearable and conformal sensors, energy harvesting, and analytics.
Dr. Joe Kvedar of Partners Healthcare led a panel discussion on the problem of evidence when traditional Randomized Clinical trial structure is not practical or cannot keep pace with changes in technology and behavior. Dr. Amy Abernethy presented the closing keynote on Sunday, describing how the Duke Clinical Research Institute is addressing the limitations of traditional medical validation in mobile health.

Papers, Demos & Awards

The conference was built around the presentation of nearly 40 full length and rapid-fire technical presentations, on topics ranging from Motivating Movement with mHealth tools to Safety and Security. Nearly 30 universities and research institutions were represented on stage. Invited talks by renowned scientists such as Roozbeh Ghaffari of MC10 and Robyn Whittaker of University of Auckland were interspersed with the presentation of new, peer-reviewed research. Fast-pitch oral presentations of demo and abstract were made during two hour-long sessions on Saturday afternoon. The demos and abstracts were also presented in interactive poster format, along with additional peer-reviewed and student posters, during receptions on Friday and Saturday evening.

Teenage entrepreneur, scientist, and patent applicant Jack Andraka joined the conference on Sunday morning to present the Best Paper and Demo awards, and share the inspiring story of his work in inventing a rapid and inexpensive method to detect a protein indicating the presence of early stage pancreatic, ovarian, and lung cancer. The Best Paper Presentation was awarded to R. Mathew Pipke of VGBio for Feasibility of Personalized Nonparametric Analytics for Predictive Monitoring of Heart Failure Patients using Continuous Mobile Telemetry. The paper describes work done by VGBio in cooperation with the George E. Wahlen Veterans Medical Center to analyze normal variation in vital signs of heart failure patients being monitored through a wearable home-monitoring system post-discharge. The Best Demo Award went to Seulki Lee and colleagues for A Low Power and Convenient Bio-impedance Monitor, and Its Application to Respiration Monitoring. The conference proceedings, which include full-length papers and demonstration papers, are available through the ACM Digital Library. Research abstracts may be viewed at the Wireless Health 2013 website.

Looking forward to 2014

The Wireless Health conference Steering Committee is pleased to announce 2014 General Chairs Wendy Nilsen, Health Scientist Administrator at the National Institutes of Health, Office of Behavioral and Social Sciences Research (OBSSR), and Julien Penders, Program Manager at Holst Center/imec, Netherlands. Wendy served as Co-General Chair in 2013 and has driven the participation of NIH and other government agencies to the conference since its inception. Julien served as Technical Program Committee (TPC) co-chair for Wireless Health 2013 and has been a member of the TPC for several years. He has been instrumental in expanding international participation in the conference. The committee hopes to expand on the success of the past conferences with increased participation from the healthcare research community in 2014, continued expansion of the popular demo and abstract submissions, and new opportunities for cross-collaboration and matchmaking among industry, academia, and funders.

The Call for Submissions (Papers, Abstracts, and Demonstrations) for Wireless Health 2014 is open from December 2013 – April 11, 2014. An additional Call for Late Breaking Research Submissions will be held in late Summer 2014.

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The Wireless Health Conference is presented by the WLSA with the support of our Members