Mobile Technologies for Prevention and Management of Chronic Diseases

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Dr. Ashok Veeraraghavan is an expert in computational imaging, machine learning, computer vision, and signal processing. He has developed several computational imaging systems and machine learning algorithms for consumer imaging, defense applications and microscopy. He is also a Technical Advisor for two computational imaging startups: Light Inc. and Lensbricks Inc. Dr. Veeraraghavan and research engineer Adam Samaniego participated (as team mobileVision) in the NSF I-Corps Feb-April 2015 cohort, where they learnt about the lean startup methodology and also leverage the training to understand the market for personalized eye health devices. This project eventually led to the ophthalmology startup OcuCheck founded by Adam Samaniego. He is currently working on several health-technology centric projects including shock prediction in the ICU, vision based measurement for sedentariness, machine learning based analysis of diabetes prevalence in south India, camera based vital signs monitoring and mobile retinal imaging. Dr. Veeraraghavan is part of the Scalable Health Initiative (sh.rice.edu) at Rice University, whose goal is to use technology to democratize access and affordability of healthcare.

In this talk, Dr. Veeraraghavan, will discuss the “MobileTech” initiative that will leverage the inter-disciplinary expertise in health, mobile technology, sensors, communication platforms, computer science, engineering, data science, and behavioral science at Rice to develop innovative tools and solutions to collect, integrate, manage, visualize, analyze, and interpret data generated by mobile and wearable sensors (from early lab feasibility to robust field utility). Dr. Veeraraghavan has shamelessly integrated ideas from Ashu Sabharwal (ECE), David Wetter (Psychology), Lydia Kavraki (CS), Anshumali Shrivastava (CS), Teresia O’Connor (Texas Childrens), Mohan Thanikachalam (Tufts), James Sulliburk (Trauma@Baylor) and numerous unsuspecting scalable health graduate students in service of this talk.