Smart Systems for Personalized and Connected Healthcare
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Future healthcare delivery and medicine will heavily rely on personalized healthcare systems, which will be connected to our everyday lives using modern communication platforms, including consumer devices and electronics. Creating these systems requires multidisciplinary engineering approaches spanning various fields including biomedical engineering, material science, mechanical engineering, electrical and computer engineering, industrial engineering, among others. In the future, smart systems for personalized and connected healthcare will become irreplaceable in disease prevention, diagnosis, and monitoring as well as medical therapies. These smart and integrated systems will benefit everyone in different stages of life from childhood to elderly ages, which is especially important and timely for aging populations and chronic patients in developed countries. The societal benefits of these smart and connected healthcare systems will also include global health settings in developing countries where practice of medicine and health-care delivery will become much more advanced while at the same time cost-effectively reaching to masses even in the most resource limited areas of the world.

This session will feature three prominent speakers representing the most recent advancements in this broad set of fields, covering both academia and industry. Prof. Ana Arias' (UC-Berkeley) talk will cover the state-of-the-art electronic materials and manufacturing technologies for wireless healthcare systems. Next, Dr. Rikky Muller (Cortera Neurosystems) will present wireless systems for neurological rehabilitation. These novel systems might improve the quality of life of millions of people suffering from severe neurological conditions, such as paralysis. Finally, Dr. Johan Lundin (University of Helsinki) will introduce emerging approaches in clinical informatics and image-based diagnosis, including mobile and cost-effective platform implementations that are especially suitable for tele-medicine and mobile-health applications. Following the presentations of the speakers there will be a moderated panel discussion, which will also involve questions and comments from the audience.