

Panel 2

On the Challenges and Opportunities of Pervasive and Ubiquitous Computing in Health Care

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TBD

Pervasive healthcare systems have the potential to revolutionize next generation medical applications and significantly improve the quality of healthcare services. In recent years, significant progress has been made in the development of a number of sensing and monitoring healthcare devices for clinical applications ranging from managing chronic diseases and acute diabetes to epilepsy and other debilitating neurological disorders. These wearable devices enable continuous monitoring of physiological signs as opposed to occasional episodic reviews with doctors and healthcare staff. More recently a growing interest in smart, implantable in vivo monitoring and intervention devices is starting to emerge. While progress is being made in the technologies associated with micro-sensing and actuation, issues related to the development of an information and computation infrastructure for the acquisition, fusion and dissemination of multi-sensory data and the development of power-efficient, QoS-aware protocols and mechanisms, for dependable, robust and secure wireless monitoring systems are still to be investigated. This panel focuses on discussing the long-term, challenging research problems and technological barriers that need to be addressed in order to enable a ubiquitous computing and communications infrastructure for large-scale, pervasive healthcare. Panelists from leading technology companies and research institutions will present brief talks centering on different aspects of the pervasive healthcare infrastructure. The audience will then be encouraged to ask questions and present short opinions.