

Biomedical and Health Informatics Lecture Series

**Tuesday, January 10, 2012
12:00 - 12:50 p.m., Room T-360**

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“Designing Mobile Technology to Support Health Management in Everyday Life”

To manage their health effectively, individuals need to do a great deal of work in their everyday lives. For instance, a diabetic patient might need to make changes to her physical activity and diet, control her blood glucose levels, and coordinate care among multiple clinicians. Mobile phones and wearable sensors are a promising avenue for supporting such health management activities. In my work, I use user-centered design methods to identify opportunities for novel mobile health interventions and to uncover factors that affect adoption of such interventions. In this talk, I will give two examples of this approach. First, I will describe the design and evaluation of a mobile phone application for managing care-related information during treatment for cancer. Cancer patients often manage care information when they are experiencing chemotherapy side effects, when they are away from home, or when they cannot concentrate due to pain or stress. I will characterize the circumstances that make information management in cancer challenging and I'll describe a mobile-phone application called HealthWeaver Mobile that I developed to support patients' information activities in those situations. Second, I will briefly discuss an investigation of individuals' privacy concerns related to the use of sensors in a mobile-phone application for encouraging physical activity. Such privacy concerns are important to understand because if they are not addressed they can lead to system abandonment. Based on my findings, I will describe strategies for designing privacy-preserving health applications that take advantage of sensors found in modern mobile phones.

Predrag "Pedja" Klasnja is a National Library of Medicine postdoctoral fellow in the Division of Biomedical and Health Informatics at the University of Washington. His research is in the areas of Health Informatics and Human-Computer Interaction. Pedja's research has focused on investigating how new technologies can help individuals to effectively manage their health in everyday life. His dissertation examined how mobile technology can help cancer patients to manage their care-related information when their abilities to deal with health information are diminished. Prior to this work, Pedja collaborated with Intel Research Seattle on projects that investigated the use of mobile phones and wearable sensors to encourage regular physical activity, privacy concerns related to the use of on-body sensors, and assessing low-salience health-related activities like walking and sitting with questionnaires running on mobile phones. His current research is exploring the use of tablet computers to support clinician-patient collaboration during oncology clinic visits and the use of mobile technologies to facilitate handoffs during inpatient care.