

2015 PerCom Workshop on Smart Environments: Closing the Loop (SmartE'15)
Renaissance St. Louis Grand Hotel, St. Louis, Missouri, USA
9:00am – 10:00am, Monday, March 23, 2015
Room: Majestic H

Clinical Translation: Smart Technologies for Health Assessment and Intervention

Keynote

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Abstract: Smart technologies that can adapt, sense, infer, learn, anticipate and intervene offer possibilities for improving health care delivery. Continuous data collection afforded by smart technologies has the potential to enrich patients' clinical pictures by augmenting self- and informant-report data and testing data collected during an office visit. Smart technologies also offer possibilities for assisting in real-time with rehabilitation and proactive health interventions. This keynote will discuss issues of importance in creating technologies that can be translated into clinical practice. For example, improving clinical translation of smart technologies for use by health-care professionals will require demonstrating that developed health-related algorithms are reliable and valid, easily visualized and of value in clinical decision-making. The clinical translation of prompting interventions will require answers to questions regarding the best timing, content and delivery of prompts in addition to issues related to motivation and the changing clinical needs of patients. These points and others will be illustrated with examples from our research using sensor data and machine learning techniques to develop algorithms that recognize activities, provide insights on functional status and automate interventions.



Biography: Maureen Schmitter-Edgecombe is a Meyer Distinguished Professor in the Department of Psychology at Washington State University and a licensed clinical psychologist. She has authored or co-authored more than 90 peer-reviewed publications investigating cognitive deficits, everyday functioning and rehabilitation issues primarily with aging, mild cognitive impairment, Alzheimer's disease and traumatic brain injury populations. She has mentored graduate students in the field of clinical neuropsychology for the past 20 years and worked extensively with aging and cognitively impaired populations. Dr. Schmitter-Edgecombe's research has been funded by multiple NIH institutes, NSF, the Alzheimer's Association and by the Life Sciences Discovery Fund and Attorney General's Office of Washington State. The long-term objective of her multidisciplinary research is to extend the everyday functional independence of the aging population and individuals with cognitive impairment by developing smart environments and technologies that promote proactive health care and ecological momentary intervention. Dr. Schmitter-Edgecombe received her B.S. from Bucknell University in 1988 and her M.S. and Ph.D. from the University of Memphis in 1991 and 1994, respectively.