

**DANIEL J. EPSTEIN DEPARTMENT OF  
INDUSTRIAL AND SYSTEMS ENGINEERING**

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**EPSTEIN INSTITUTE SEMINAR • ISE 651 SEMINAR**

***Behavioral Intervention Technologies  
for Depression***

**David C. Mohr, Ph.D.**

**Professor, Departments of Preventive Medicine, Psychiatry,  
and Medical Social Sciences, Feinberg School of Medicine  
Northwestern University**

**ABSTRACT**

This talk will review the program of research on telemental health treatment for depression within the Northwestern University Center for Behavioral Intervention Technologies (CBITs). Depression is common and imposes a high societal burden in terms of cost, morbidity, quality of life, and mortality. While most people with depression want behavioral intervention, more than 75% identify barriers to accessing this care. This talk will describe current research focused on developing and evaluating patient-facing web-based, mobile, and sensor-based intervention technologies that are aimed at increasing access to care, facilitating communication between providers and patients, and improving clinical outcomes.

**TUESDAY, DECEMBER 4, 2012  
ANDRUS GERONTOLOGY BLDG (GER) ROOM 309  
3:30 – 5:00 PM**

## SPEAKER BIO



**David C. Mohr**, Ph.D. is a tenured professor in the Northwestern University Feinberg School of Medicine's Departments of Preventive Medicine, Psychiatry, and Medical Social Sciences. He is the Director of Northwestern University's Center for Behavioral Intervention Technologies (CBITs; [cbits.northwestern.edu](http://cbits.northwestern.edu)) and Deputy Director of the Center for Engineering and Health. Dr. Mohr's work, funded by multiple NIH grants, lies at the intersection of behavioral science, technology, and clinical intervention research, and is focused on developing, optimizing, and evaluating interventions that harness web-based and wireless technologies to promote health and mental health. His current work in development includes the following projects: 1) the development a context sensing mobile application that harnesses indwelling sensor data within the phone to identify specific physical, social and emotional patient states and to integrate this system into mobile interventions; 2) the integration of web-based intervention and peer networking tools that use principles of online collaborative learning and supportive accountability to enhance learning and adherence; 3) the development of conversational agents (virtual humans) that can be used in web-based interventions to support interpersonal skills-training components of depression treatment programs, 4) evaluation of a stepped care treatment model integrating web-based care and telephone psychotherapy for the treatment of depression in primary care, and 5) the creation of a mobile intervention that monitors adherence to medications, provides just-in-time reminders, monitors response and side effects, and provides aggregated, actionable information to prescribing physicians. This later adherence system will be tested in patients receiving pharmacotherapies for depression and HIV, with a somewhat simpler version for patients with schizophrenia. Dr. Mohr is also interested in developing new methodologies for the evaluation of psychological and behavioral interventions that address the unique needs and rapidly changing technological environment of behavioral intervention technologies.