



The IEEE ME Chapter of the Communications/Computer Societies
Presents:

Through-the-Wall Personnel-Detection Technology

Dr. Victor Lubecke, Department of Electrical Engineering,
University of Hawaii at Manoa

Monday, October 29, 2007 at 11:00 AM
(Free Lunch is provided)

Arthur St. John Hill Auditorium
Electrical & Computer Engineering Dept, Barrows Hall, Orono, ME



Abstract

Technology that can be used to unobtrusively detect and monitor the presence of human subjects from a distance and through barriers can be a powerful tool for law enforcement, military, and health monitoring applications. Various technologies from passive millimeter-wave imaging to ultra wideband radar have demonstrated potential for identifying silhouettes, detecting gross motion, and even distinguishing illicit materials and biological characteristics through various obstructions. Compact radar solutions have been used to detect and monitor cardiopulmonary activity of hidden stationary subjects, in some cases leveraging the presence of ambient radio signals to provide a virtually passive means to detect, isolate, and physiologically monitor human subjects through walls.

Practical applications ranging from counter-terrorism to outpatient monitoring require solutions that are accurate, affordable, easily deployed, and minimally tended. An overview of current research efforts addressing these challenges through radio, signal processing, and sensor networking theory and hardware will be presented.

Bio

Victor Lubecke currently conducts research in remote monitoring of human life signs, microwave/millimeter-wave circuits, and MEMS integration. He received his Ph.D. degree in Electrical Engineering from Caltech in 1995, and worked for the NASA Jet Propulsion Laboratory, Riken (Japan), and Bell Laboratories/Lucent Technologies, prior to joining the University of Hawaii in 2003. He is currently a Distinguished Microwave Lecturer of the IEEE, and is actively involved in IEEE MTT and SPIE symposia and publications. He has written over 100 papers for which he has received several awards, has had 4 US patents granted with several more pending for IP which has also received peer recognition, and co-founded a technology start-up company.



Online Registration is required

http://ewh.ieee.org/r1/maine/com_c

Register Before Oct 19 to enter the draw for a
4GB iPod Nano with video (\$150 value)