



THE ELECTRICAL & COMPUTER ENGINEERING PROGRAM PRESENTS

New Opportunities in Underwater Communication: Acoustic Particle Velocity Channels

Ali Abdi, PhD, Associate Professor

Sunday, April 12
12 – 1 p.m. Followed by light lunch
Lecture Hall 144

In this talk we show by taking advantage of the acoustic particle velocity, in addition to the acoustic pressure, multichannel reception can be accomplished in underwater acoustic channels. A vector sensor equalizer that measures pressure and particle velocity at a single point in space will be introduced. Channel modeling issues for particle velocity channels will be discussed as well. Overall, the results demonstrate the utility of acoustic particle velocity channels for underwater acoustic communication.

Ali Abdi (<http://web.njit.edu/~abdi/>) received the Ph.D. degree in electrical engineering from the University of Minnesota, Minneapolis, and joined the Department of Electrical and Computer Engineering of New Jersey Institute of Technology, Newark, where he is currently an Associate Professor. His research interests include estimation and characterization of wireless channels, digital communication in underwater and terrestrial channels, blind modulation recognition and parameter estimation, space-time processing/interference cancellation, systems biology and molecular networks. He is a Senior Member of IEEE, was an Associate Editor for IEEE Transactions on Vehicular Technology from 2002 to 2007, holds several pending and issued patents, and has published over eighty journal and conference papers. His recent awards include 2006 NJIT Teaching Award and 2008 New Jersey Inventors Hall of Fame (NJIHof) “Innovators Award” on Underwater Acoustic Communication from the Research and Development Council of New Jersey.



For more information contact: