

Advances in Ultrasonic Imaging Technologies

Dr. Maria Helguera

Chester F. Carlson Center for Imaging Science
Rochester Institute of Technology

Ultrasonography is evolving rapidly with recent technological advances such as higher operating frequencies (> 20 MHz), smaller transducers, and transmission of ultrasound through air. In this talk Dr. Helguera will present different applications in which the Ultrasound Imaging lab has been involved, including tissue characterization at medical diagnostic frequencies, high frequency ultrasound system characterization, acoustic microscopy, and non-contact ultrasonic characterization of materials.

María Helguera was born in Mexico City. She holds a BS in Physics from the National Autonomous University of Mexico, an MS in Electrical Engineering from the University of Rochester and a PhD in Imaging Science from Rochester Institute of Technology. For the past two years she has been a visiting assistant professor at the Center for Imaging Science. Her research is focused on the development of ultrasound tissue characterization techniques, image processing and system characterization. She is the vice-president of the Engineering in Medicine and Biology Rochester chapter of the IEEE.