Following Ariadne's thread: Sensing technologies for assisted-mobility and way-finding without sight.

Roberto Manduchi

Associate Professor of Computer Engineering

School of Engineering, UCSC

Abstract:

Blindness and other visual impairments may lead to major functional limitations in one's daily life. Among other things, loss of sight affects one's ability to move about independently, especially in an unfamiliar environment. In this talk I will present some recent work at UC Santa Cruz using different technologies (computer vision, structured light, radio beaconing) to support short-range mobility as well as way-finding for visually impaired persons. Throughout the presentation, I will try to highlight the opportunities and pitfalls of research in assistive technology, and will share some reflections about what it takes to develop a functional, reliable, usable system with serious hopes of acceptance.

Note: Part of the research presented was carried out in collaboration with the James Coughlan of the Smith-Kettlewell Eye Research Institute in San Francisco.

About the speaker:

Roberto Manduchi obtained his "Dottorato di Ricerca" degree from the University of Padova, Italy, in 1993. He held position at Apple Computer, Inc., and at the NASA Jet Propulsion Laboratory. In 2001 he joined the faculty at UC Santa Cruz, where he currently is an Associate Professor of Computer Engineering. His main research area is in the field of computer vision, with applications to assistive technology for the visually impaired. His research is currently funded by the NSF and the NIH.

Next week:

Ming Chao, Manager, Americas Operations, and Mike Ruggiero, Senior Analyst, Seagate Technologies, on “How Seagate works”.