Colorado State University's
Information Science and Technology Center (ISTeC)
presents two lectures by

Dr. Robin Murphy

**Texas A&M University Raytheon Professor
of Computer Science and Engineering
Director, Center for Robot-Assisted
Search and Rescue**

ISTeC Distinguished Lecture
in conjunction with the
**Electrical and Computer Engineering Department and
Computer Science Department Seminar Series**

"Being There: Lessons Learned in Rescue Robotics from 11 Incidents from 2001-2009"

Monday, March 29, 2010
Reception: 10:30 a.m.
Lecture: 11:00 – 12:00 noon
Location: Lory Student Center Room 230

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Special Lecture Co-Sponsored by The Women In Natural Sciences (WINS) and ISTeC

"The 50 Worst Things You Can Do in Your Career"

Monday, March 29, 2010
Lecture: 3:00 – 3:50 p.m.
Location: CS130
Reception: 4:00 p.m., CS 305

ABSTRACT

"Being There: Lessons Learned in Rescue Robotics from 11 Incidents from 2001-2009"

The Center for Robot-Assisted Search and Rescue (CRASAR) has participated in 11 incidents in the US and Germany, starting with the World Trade Center collapse in 2001 and most recently the State Archives Collapse in Cologne, Germany. CRASAR has deployed land, sea, and aerial vehicles, and two deployments have included teams from the International Rescue System institute, providing a unique perspective on how robotics hardware and software must work with real people under challenging temporal and environmental conditions. As a result of these field experiences, we have shifted over the past 10 years from traditional hypothesis-driven, top-down research to a bottom-up approach where research questions are extracted from field experiences. One major research question is the role of autonomy and the appropriate human-robot interaction. Our work has led to conceptualization of rescue robotics as a remote presence application where the human and robot form an active joint cognitive system, versus the model of the robot as an independent, taskable agent. Another research question concerns victim management, that is, what will the robots do after they find a survivor? Our work with medical doctors and communications researchers has led to an investigation of triage protocols and how the robot must express a consistent and comforting affective presence. The research questions raised and the lessons learned by participating in disasters illuminate a roadmap and requirements for all types of rescue robots. While much work remains in rescue robotics, current technology is useful for disasters and are a tribute to legacy of Motohiro Kisoi.

SPEAKER BIOGRAPHY

Dr. Robin Roberson Murphy (http://faculty.cse.tamu.edu/murphy/) is the Raytheon Professor of Computer Science and Engineering at Texas A&M and directs the Center for Robot-Assisted Search and Rescue. She holds a B.M.E. in mechanical engineering, a M.S. and Ph.D in computer science in 1980, 1989, and 1992, respectively, from Georgia Tech. In 2008, she was awarded the AI Aube Outstanding Contributor award by the AUVSI Foundation, for her insertion of ground, air, and sea robots for urban search and rescue (US&R) at the 9/11 World Trade Center disaster, Hurricanes Katrina and Charley, and the Crandall Canyon Utah mine collapse. She is a Fellow of the IEEE, Distinguished Speaker for the IEEE Robotics and Automation Society, and has served on numerous governmental boards, including the Defense Science Board and NSF CISE Advisory Council.

To arrange a meeting with the speaker, please contact Dr. Adele Howe at (970) 491-4192 or adele.howe@colostate.edu.

ISTeC (Information Science and Technology Center) is a university-wide organization for promoting, facilitating, and enhancing CSU's research, education, and outreach activities pertaining to the design and innovative application of computer, communication, and information systems. For more information, please see ISTeC.ColoState.edu.

Both lectures are open to the public.