

The
John J. Reilly Center for Science, Technology and Values
and the
Department of Computer Science and Engineering
Present

BIO-INSPIRED APPROACHES FOR ROBOTIC TEAMS

In recent research conducted for the U.S. Army and Navy, we are exploring a multiplicity of methods for controlling and coordinating teams of robots using models derived from biological systems. This includes models drawn from bird lekking behavior, wolf pack predation, and deception in humans, squirrels and bird mobbing. After first reviewing earlier bio-inspired approaches from our laboratory leading up to these new results, the motivation, underlying behaviors, and computational models that are used to produce coherent distributed robotic agent behavior are presented, with simulation and robotic results as available to demonstrate this ongoing work.

Thursday, Sept. 26

3:30 p.m.

138 DeBartolo



DR. RONALD C. ARKIN
GEORGIA TECH

Ronald C. Arkin is Regents' Professor and Associate Dean for Research in the College of Computing at Georgia Tech. He served as STINT visiting Professor at KTH in Stockholm, as Sabbatical Chair at the Sony IDL in Tokyo, and as a member of the Robotics and AI Group at LAAS/CNRS in Toulouse. Dr. Arkin's research interests include behavior-based control and action-oriented perception for mobile robots and UAVs, hybrid deliberative/reactive architectures, robot survivability, multiagent robotics, biorobotics, human-robot interaction, robot ethics, and learning in autonomous systems. Professor Arkin served on the Board of Governors of the IEEE Society on Social Implications of Technology, the IEEE RAS AdCom, and the co-chair of IEEE RAS TC on Robot Ethics. He is a Distinguished Lecturer for the IEEE Society on Social Implications of Technology and a Fellow of the IEEE.