AUTONOMOUS CONTROL & INFO TECH

TOPIC	Game Theory and its Applications in Multi-agent Systems
ORGANIZERS	Student Leadership Council and Faculty of TECHLAV
AREA	Communications Systems, Game Theory
SPEAKER	Nima Namvar, PhD student
DATE	October 23
TIME	3-4 pm EST
VENUE	IRC 410, North Carolina A&T State University, UTSA and SIPI are joining through video-conferencing
FEES	No Charge

SYNOPSIS

Wireless communication is seen as key technology in multi-robot systems, which enables the agents to exchange information, negotiate task-scheduling, and communicate with control centers far from their location. However, designing ad-hoc wireless communication protocols, tailored to the particular capabilities and requirements of the cooperating agents is a challenging task that has to be addressed prior to deployment of such systems. Game Theory provides a suitable mathematical framework to model and analyze the conflict and cooperation among the intelligent robots. Therefore, designing application-specific communication protocols for a network of robots is of special interest. This presentation provides a survey on game theory, as well as its applications in modeling and design of the proper communication protocols in a network that consists of multiple intelligent agents. Also, I will discuss the recent state-of-the-art research in this field, its current challenges and possible solutions.

ABOUT THE SPEAKER

Nima Namvar received his B.S. degree in Electrical Engineering (EE), from Amirkabir University of Technology in 2010. In 2013 he received his M.S. form University of Tehran in EE, majoring in Communications Systems. He is pursuing his PhD at North Carolina A&T State University since fall of 2014. His research interests lie in the broad range of Communication Systems, such as cellular wireless networks, machine-to-machine (M2M) communications and the internet of things (IoT), cognitive radio, Device to Device (D2D) communication, and adaptive networks with an emphasis on Game Theoretic modeling and analysis of wireless networking of intelligent agents.