AUTONOMOUS CONTROL & INFO TECH

TOPIC	Game Theory and its Applications in Multi-agent Systems
ORGANIZERS	Student Leadership Council and Faculty of the TECHLAV
AREA	Communications Systems, Game Theory
SPEAKER	Nima Namvar, PhD students
DATE	October 23
TIME	15-16 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 a key technology in multi-robot systems, enabling the agents to exchange their collected information, negotiate task-scheduling, and communicate with control centers far from their location. However, designing ad-hoc wireless communication protocols which are tailored to the particular capabilities and requirements of the cooperating agents is a challenging task that has to be addressed prior to deploying such systems. In this regard, Game Theory provides a suitable mathematical framework to model and analyze the conflict and cooperation among the intelligent robots and therefore, it is of special interest in the field of designing application-specific communication protocols for a network of robots. This talk provides a survey on the game theory and its applications in modeling and designing the proper communication protocols in a network consisting of multiple intelligent agents. We will discuss the recent state-of-the-art research in this field as well as the current challenges and possible solutions.

ABOUT THE SPEAKER
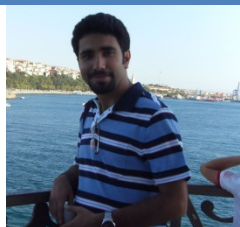
Nima Namvar received his B.S. degree from Amirkabir University of Technology in Electrical Engineering (EE) in 2010. In 2013 he received his M.S. form University of Tehran in EE, majoring in Communications Systems. He is currently a PhD student at North Carolina A&T State University since September 2014. 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, cognitive radio, D2D, and adaptive networks with an emphasis on Game Theoretic modeling and analysis of wireless networking of intelligent agents.