TOPIC	Fault Diagnosis for an Unknown Plant
ORGANIZERS	Student Leadership Council and Faculty of ACIT Institute and TECHLAV Center
AREA	Automata Theory, Discrete Event System, Fault Diagnosis
SPEAKER	MohammadMahdi Karimi, PhD candidate at Electrical Engineering Dept., North Carolina A&T State University
DATE	Friday 18th Dec. 2015
TIME	3-4PM (EST)
VENUE	Fort IRC 410, North Carolina A&T State University, UTSA and SIPI will be joining through video-conferencing
FEES	No Charge

SYNOPSIS

Failure diagnosis is an important part of any reliable system. In this talk we will discuss our recent results on diagnosis of unknown systems. The proposed technique is a novel, systematic approach that constructs a failure diagnoser to detect the failures and identify their nature within the context of Discrete Event Systems (DES). This will be achieved by monitoring observable behavior of the system and inferring the normal/faulty behaviors of a DES plant. Furthermore, a capable active-learning technique will be introduced by which we will construct a labeled deterministic finite state automaton to be used as diagnoser. The proposed active learning technique allows us to handle uncertain changing dynamics of DES plants.

ABOUT THE SPEAKER

Mohammad Mahdi Karimi is a second year PhD candidate researching in the field of Reliable Control Systems. He started his PhD program in August of 2014 at North Carolina A&T State University and is currently a member of ACCESS Laboratory as well as TECHLAV Center, working in the area of Discrete Event Systems and Robotics.

Previously during 2011-2013 he was part of APAC research group in KNTU university, working on industrial soft-sensor design and system identification. His area of interest include robotics, Automata Theory, Discrete Event System, and Fault Diagnosis. E-mail: **mmkarimi@aggies.ncat.edu**