



TOPIC	Nonstationary Extreme Events Models
AREA	Control Systems, Renewable Energy Resources, Extreme Events Modeling, Machine Learning and Data Mining
SPEAKER	Norbert Ayine Agana, PhD students, ACIT Center, North Carolina A&T State University
DATE	20 October 2014, Thursday
TIME	11:00 AM to 11:30 AM
VENUE	ACIT Center, Room 342, Fort IRC Bldg, North Carolina A&T State University, 1601 East Market Street, Greensboro, NC 27411
FEES	No Charge

SYNOPSIS

Extreme events by definition are rare events that occur infrequently but when they do occur their impacts on both physical and socioeconomic resources are very enormous. Extreme climate events such as heavy precipitation, drought, tropical cyclones, hurricanes and heat waves pose various types of hazards to the society, especially the vulnerable sectors of the environment. Over the last few decades, our understanding of the mean behavior of the climate and its normal variability has improved to a large extent but the same cannot be said of climate extremes. Climate extremes represent nonlinear systems that are very hard to study and even harder to make predictions on them. The objective of this research is to assess how these extreme events relate to modes of climatic variability such as El Nino Southern Oscillation, the Pacific Decadal Oscillation and the North Atlantic Oscillation by utilizing the familiar distributions that arise out of the extreme value theory such as the generalized extreme value distribution or the generalized Pareto distribution. Nonstationarity is ensured by expressing the parameters of the distribution as functions of the covariates. In this work, only the location parameter will be expressed as a function of the covariates. As a case study, the model will be fitted to annual maxima precipitation data at Pasquotank, North Carolina and also to the mean sea level data at Pensacola, Florida.

ABOUT THE SPEAKER

REMARKS, IF ANY