SE&T Colloquium Series-Fall 2016

Speaker	Dr. Rajani Muraleedharan Department of Electrical and Computer Engineering
Title	***Can Machine Learning Provide Collaborative Autism Diagnosis?***
Abstract	One of the essential tools of social interaction in human is the ability to recognize emotions in verbal and non-verbal form such as voice, facial expressions, gestures, eye-movements, and sign-language. Emotion expression can be easily interpreted as one's state of mind, and could be beneficial in differentiating normal and abnormal behavior and therefore, provide possible interventions to reduce stress and avoid harm to oneself and others. Many psychological studies suggest that human abnormal behavior relates to their emotional state of mind, which are symptoms or signs of underlying disorders or pathologies. The evolution of wireless and sensor technology has enabled deployment of tiny sensors capable of communicating information such as visual and audio signals from any area and/or person of interest. A prototype capable of recognizing behavior of an individual without profiling their condition to identify and predict the outcome based on present state of behavior, and suggest intervention methods to alleviate stress, and reduce public meltdowns is proposed. In a pilot study, a group of high-functioning autism and non-autistic individuals is chosen to assess and identify the social and communication deficits using the semi-structured standard called autism diagnostic observation schedule-generic (ADOS-G). The evidence-based assessment of social behavior is dependent on evaluating the observations made by experts (psychologist and healthcare provider), caregiver and support group and effectiveness of behavior recognition using multimodal emotion detection algorithm.
Date	Tuesday, November 15
Time	4:10-5:00pm
Place	Pioneer 240
	Refreshments will be served at 4:00pm.