**Tutorial:** Event reasoning for transport video surveillance (one hour)

Dr. Huiyu Zhou

ECIT, The Queen’s University Belfast, United Kingdom. Personal webpage: <http://sites.google.com/site/huiyujoe/>

E-mail: h.zhou@ecit.qub.ac.uk

**Abstract of the talk:**

The aim of transport video surveillance is to provide robust security camera solutions for mass transit systems, ports, subways, city buses and train stations. As we have known, numerous security threats exist within the transportation sector, including crime, harassment, liability suits and vandalism. Possible solutions have been directed to insulate transportation system from security threats and to make the system safer for passengers. In this talk, I will introduce our solution to deal with the challenges in transports, in particular, city buses. For the benefit of easy understanding, I will structure the talk into the following four sections: (1) The techniques that we developed to automatically extract and select features from face images for robust age recognition, (2) An effective combination of facial and full body measurements for gender classification, (3) Human tracking and trajectory clustering approaches to handle challenging circumstances such as occlusions and pose variations, and (4) event reasoning in smart transport video surveillance.