Time & Location: July 1, 2013 at 2:30 PM in HEC 101
Title: Recognition of Complex Events in Open-Source Web-Scale Videos: Features, Intermediate Representations and Their Temporal Interactions

Recognition of complex events captured under real-world settings, has emerged as a challenging area of research across both computer vision and multimedia community. In this dissertation, we present a bottom-up approach towards an end to end framework for complex event recognition in widely available, consumer uploaded web-scale videos. We structure our approach into the following key stages and highlight our novel contributions in each of these stages: (a) Extraction of novel semi-local features, (b) Construction of intermediate representations from these features, (c) Integration of the intermediate representations into mid-level spatio-temporal concepts, and (d) Modeling temporal interactions between the spatio-temporal concepts, to recognize complex events. Promising results achieved through extensive experiments demonstrate the efficacy and importance of each stage in the proposed computational approach to obtain state-of-the-art performance in complex event recognition.

Major: Computer Engineering

Educational Career:
Bachelor’s of Computer Science and Engineering, BS, 2003, Burdwan University

Committee in Charge:
Mubarak Shah, Chair, Center of Research in Computer Vision
Rahul Sukthankar, Co-Chair, Electrical Engineering and Computer Science
Ratan Guha, Electrical Engineering and Computer Science
Jospeh Laviola, Electrical Engineering and Computer Science
Brian Moore, Mathematics and Physics

Approved for distribution by Mubarak Shah, Committee Chair, on March 22, 2013.

The public is welcome to attend.