

# UNIVERSITY OF SOUTH FLORIDA

## *Major Research Area Paper Presentation*

### *Automated Approaches to Enable Innovative Civic Applications from Citizen Generated Imagery*

by  
*Hye Seon Yi*

*For the Ph.D. degree in Computer Science and Engineering*

With the rapid permeance of smart-phone technologies today, citizens are increasingly active in collaborating with public officials for improved quality of life. However, for effective utility, public officials must be empowered with optimal tools that can best leverage citizen participation. In this paper, we present the design and details of computer vision techniques to automatically detect and localize street garbage from citizen generated imagery (Figure 1). Our system can be a vital cog in the generation smart governance systems geared towards cleaner and healthier neighborhoods. We present our future work in this space of computer vision techniques to process additional citizen data for innovative civic applications.

*Thursday, DecembceCommittee*

---

Sriram Chellappan, Ph.D., Major Professor  
Srinivas Katkoori, Ph.D.  
Mehran Mozaffari Kermani, Ph.D.  
James Stock, Ph.D.  
Stephen Sadow, Ph.D.

*Xinming Ou, Ph.D.*  
*Associate Chair for Graduate Affairs*  
*Computer Science and Engineering*  
*College of Engineering*

*Sudeep Sarkar, Ph.D.*  
*Department Chair*  
*Computer Science and Engineering*  
*College of Engineering*

#### **Disability Accommodations:**

*If you require a reasonable accommodation to participate, please contact the  
Office of Diversity & Equal Opportunity at 813-974-4373 at least five (5) working days prior to the event.*