**Title:** Robust Visual Tracking via Sparse Representation

**Time:** 12:30pm, Oct. 12th, 2011 (Wednesday)

**Location:** NAC Building, Room 7/313

**Speaker:** Dr. Haibin Ling

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Philadelphia, PA 19122, USA

**Abstract:**

We propose a robust visual tracking method by casting tracking as a sparse approximation problem in a particle filter framework. In this framework, occlusion, noise and other challenging issues are addressed seamlessly through a set of trivial templates. Specifically, to find the tracking target in a new frame, each target candidate is sparsely represented in the space spanned by target templates and trivial templates. The sparsity is achieved by solving an L1-regularized least squares problem. The effectiveness of the proposed tracker has been validated extensively both qualitatively and quantitatively. In particular, we designed a new algorithm for tracking target under severe blur effects.

**Bio:**

Haibin Ling received the B.S. degree in mathematics and the MS degree in computer science from Peking University, China, in 1997 and 2000, respectively, and the PhD degree from the University of Maryland, College Park, in Computer Science in 2006. From 2000 to 2001, he was an assistant researcher in the Multi-Model User Interface Group at Microsoft Research Asia. From 2006 to 2007, he worked as a postdoctoral scientist at the University of California Los Angeles. After that, he joined Siemens Corporate Research as a research scientist. Since fall 2008, he has been an Assistant Professor at Temple University. Dr. Ling's research interests include computer vision, medical image analysis, human computer interaction, and machine learning. He received the Best Student Paper Award at the ACM Symposium on User Interface Software and Technology (UIST) in 2003.

**Agenda:**

10:30 am – Arrive at CCNY (Prof. Tian’s office, Steinman Hall, room ST-640 and visit Media Lab)

11:30pm – 12:20pm, Lunch (Profs. Tian, Zhu, etc) at NAC faculty dining room

12:30 pm ~ 1:30 pm: Talk (NAC 7/313)

1:30 pm – 2:20 pm, Visit Visual Computing Lab (Prof. Zhu and students) at NAC 8/210

2:30pm, Finish

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**YingLi Tian’s Contact:**

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**Directions to CCNY:**

From Time Square area (Penn Station), take MTA subway train A (express train preferred), B and D uptown direction to 145th street stations (on St. Nicolas Ave), or take train 1 uptown direction to City College station (on Broadway Ave). Walk to Convent Ave & 140th street.

Or take Taxi to CCNY at Convent Ave & 140th Street.