

YU-WEI CHAO

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AREA OF INTERESTS

Computer Vision, Machine Learning, Signal Processing

EDUCATION

University of Michigan, Ann Arbor, MI September 2011 - Present
M.S. in Electrical Engineering: Systems GPA: 3.91/4.00
Advisor: Prof. Silvio Savarese

National Chiao Tung University, Hsinchu, Taiwan September 2005 - June 2009
B.S. in Electronics Engineering, Minor in Applied Mathematics GPA: 3.85/4.00

Carnegie Mellon University, Pittsburgh, PA Fall 2008
International Exchange Program GPA: 3.80/4.00

WORK EXPERIENCE

Research Assistant, Academia Sinica, Taipei, Taiwan August 2010 - July 2011

- Assist academic research in computer vision, pattern recognition and machine learning
- Instruct undergraduate RAs in machine learning/pattern recognition topics
- Served as reviewer of ACCV 2010 and ICME 2011
- **Mentor**: Dr. Yu-Chiang Frank Wang

RESEARCH PROJECTS

3D Indoor Scene Understanding using Geometric and Semantic Cues August 2012 - Present

- Exploit geometric coherence between objects and the scene to recover layout of cluttered rooms
- **Advisor**: Prof. Silvio Savarese

Semantic Structure from Motion with Points, Regions, and Objects September 2011 - November 2011

- Applied and analyzed different region classifiers for Semantic Structure from Motion
- **Advisor**: Prof. Silvio Savarese

Supervised Dictionary Learning for Sparse Representation Classification February 2011 - July 2011

- Proposed a supervised dictionary learning algorithm for face recognition and handwritten digit recognition
- **Advisor**: Dr. Yu-Chiang Frank Wang

Locality and Group-Sensitive Sparse Representation for Visual Classification August 2010 - January 2011

- Proposed a novel sparse representation algorithm for supervised image classification
- **Advisor**: Dr. Yu-Chiang Frank Wang

Interactive Cosegmentation on Groups of Related Images Fall 2008

- Created a dataset and ground truth labels for image segmentation (38 groups with 643 images)
- **Advisor**: Prof. Tsuhan Chen

TEACHING EXPERIENCE

Teaching Assistant of online courses at Coursera

- Computer Vision: From 3D Reconstruction to Visual Recognition January 2013
<https://www.coursera.org/course/computervision>

Graduate Student Instructor (GSI) at University of Michigan

- EECS 442 Computer Vision Fall 2012
http://www.eecs.umich.edu/vision/teaching/EECS442_2012/eecs442.html

PUBLICATIONS

- C.-P. Wei, **Y.-W. Chao**, Y.-R. Yeh, and Y.-C. F. Wang, "Locality-Sensitive Dictionary Learning for Sparse Representation Based Classification," To appear in *Pattern Recognition*.
- S. Y. Bao, M. Bagra, **Y.-W. Chao**, and S. Savarese, "Semantic Structure From Motion with Points, Regions, and Objects," *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2012.
- **Y.-W. Chao**, Y.-R. Yeh, Y.-W. Chen, Y.-J. Lee, and Y.-C. F. Wang, "Locality-constrained Group Sparse Representation for Robust Face Recognition," *Proceedings of the IEEE International Conference on Image Processing (ICIP)*, 2011.

YU-WEI CHAO

HONORS & AWARDS

- **Government Scholarships for Study Abroad (GSSA)**, Ministry of Education, Taiwan May 2011
- **Achievement Award for Mandatory Service Officers**, Ministry of National Defense, Taiwan June 2010
- **Study Abroad Scholarship for Outstanding College Students**, Ministry of Education, Taiwan Fall 2008
- **Academic Achievement Award (Class Rank: 2/51)**, National Chiao Tung University Spring 2008

OTHER ACHIEVEMENTS

- **Technology Transfer** - Industrial Technology Research Institutes, Hsinchu, Taiwan December 2011
Sparse Representation Based Face Recognition Technology

SKILLS & LANGUAGES

- Programming Languages: C/C++, MATLAB, Java, Python
- Operating Systems: Windows, Linux
- Languages: English, Chinese (Mandarin), Taiwanese