Yu-Wei Chao

Contact Information

University of Michigan
Computer Science and Engineering
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Research Interests

Computer vision, machine learning, object/activity recognition, 3D scene understanding

Education

University of Michigan, Ann Arbor, MI — Sept 2013 to present
Ph.D. in Computer Science and Engineering
Advisor: Prof. Silvio Savarese

University of Michigan, Ann Arbor, MI — Sept 2011 to Apr 2013
M.S. in Electrical Engineering: Systems — GPA: 3.96/4.00
Advisor: Prof. Silvio Savarese

National Chiao Tung University, Hsinchu, Taiwan — Sept 2005 to June 2009
B.S. in Electronics Engineering — GPA: 85.45/100.00
Minor in Applied Mathematics

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

Rsearch Experience

Stanford University, Stanford, CA — July 2013 to present
Visiting Student Researcher
- Human group activity recognition
- Advisor: Prof. Silvio Savarese

University of Michigan, Ann Arbor, MI — May 2013 to present
Graduate Student Research Assistant (GSRA)
- 3D layout estimation of indoor scenes
- Advisor: Prof. Silvio Savarese

Academia Sinica, Taipei, Taiwan — Aug 2010 to July 2011
Research Assistant
- Image classification via sparse representation
- Supervised dictionary learning for sparse representation
- Mentor: Dr. Yu-Chiang Frank Wang

Publications

Y.-W. Chao, W. Choi, C. Pantofaru, and S. Savarese. Layout Estimation of Highly Cluttered Indoor Scenes using Geometric and Semantic Cues. In *Proceedings of the International Conference on Image Analysis and Processing* (ICIAP), 2013. (**oral presentation**, 7.9% acceptance rate)

W. Choi, **Y.-W. Chao**, C. Pantofaru, and S. Savarese. Understanding Indoor Scenes using 3D Geometric Phrases. In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition* (CVPR), 2013. (**oral presentation**, 3.2% acceptance rate)

C.-P. Wei, **Y.-W. Chao**, Y.-R. Yeh, and Y.-C. F. Wang. Locality-Sensitive Dictionary Learning for Sparse Representation Based Classification. *Pattern Recognition*, Vol. 46, No. 5, pp.1277–1287, May 2013.

S. Y. Bao, M. Bagra, **Y.-W. Chao**, and S. Savarese. Semantic Structure From Motion with Points, Regions, and Objects. In *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. In *Proceedings of the IEEE International Conference on Image Processing* (ICIP), 2011.

Teaching Experience

Computer Vision (EECS 442), University of Michigan — Fall 2012

Graduate Student Instructor (GSI)

- Served as the only GSI for a class with 80+ student
- Taught weekly section on topics from class; demonstrated off-the-shelf softwares
- Managed an online forum for discussions; held office hours to provide individualized help

Computer Vision: From 3D Reconstruction to Visual Recognition, Coursera

Teaching Assistant

- Organized lecture materials

Awards and Honors

Government Scholarships for Study Abroad (GSSA), Ministry of Education, Taiwan — May 2011

Study Abroad Scholarship for Outstanding College Students, Ministry of Education, Taiwan — Fall 2008

Academic Achievement Award, National Chiao Tung University — Spring 2008

Professional Service

Reviewer

- International IEEE Workshop on 3D Representation and Recognition (3dRR-13), 2013
- International Conference on Image Analysis and Processing (ICIAP), 2013

Student Volunteer

- IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2013
- IEEE Statistical Signal Processing Workshop (SSP'12), 2012

Other Achievements

Technology Transfer - Industrial Technology Research Institutes, Hsinchu, Taiwan — Dec 2011

- Sparse Representation Based Face Recognition Technology

Skills and Languages

Programming Languages: C/C++, MATLAB, UNIX shell scripting, and others

Operating Systems: Linux, Windows and Mac OS X

Languages: English, Chinese (Mandarin), and Taiwanese