Yu-Wei Chao

Contact University of Michigan (734) 730-7701 Information Computer Science and Engineering ywchao@umich.edu 2260 Hayward Street http://www.umich.edu/~ywchao/ Ann Arbor, MI 48109-2121

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. Jia Deng

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 Minor in Applied Mathematics

Carnegie Mellon University, Pittsburgh, PA Fall 2008

International Exchange Program GPA: 3.80/4.00

GPA: 85.45/100.00

July 2013 to Dec 2013

Aug 2010 to July 2011

Work EXPERIENCE University of Michigan, Ann Arbor, MI

May 2013 to present

Graduate Student Research Assistant (GSRA) • Human action understanding

• Advisors: Prof. Jia Deng

DAQRI, Mountain View, CA

May 2014 to Aug 2014

Research Intern

• Mentors: Chris Broaddus, Wenyi Zhao, Byungsoo Kim

Stanford University, Stanford, CA

Visiting Student Researcher

• Human group activity recognition

- 3D layout estimation of indoor scenes
- Advisor: Prof. Silvio Savarese

Academia Sinica, Taipei, Taiwan

Research Assistant

• Image classification via sparse representation • Supervised dictionary learning for sparse representation

• Mentor: Dr. Yu-Chiang Frank Wang

Publications

W. Choi, Y.-W. Chao, C. Pantofaru, and S. Savarese. Discovering Groups of People in Images. In Proceedings of the European Conference on Computer Vision (ECCV), 2014.

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 542), University of Michigan

Fall 2014

Graduate Student Instructor (GSI)

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

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 Conference on Pattern Recognition (ICPR), 2014
- 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: MATLAB, C/C++, OpenCV, Python, UNIX shell scripting, and others

Operating Systems: Linux, Windows and Mac OS ${\bf X}$

Languages: English, Chinese (Mandarin), and Taiwanese