

Yu-Wei Chao

CONTACT INFORMATION	University of Michigan Computer Science and Engineering 2260 Hayward Street Ann Arbor, MI 48109-2121	(734) 730-7701 ywchao@umich.edu http://www.umich.edu/~ywchao/
RESEARCH INTERESTS	Computer vision, machine learning, object/human action recognition, 3D scene understanding	
EDUCATION	University of Michigan , Ann Arbor, MI Ph.D. in Computer Science and Engineering Advisor: Prof. Jia Deng	09/2013 – present
	University of Michigan , Ann Arbor, MI M.S. in Electrical Engineering: Systems Advisor: Prof. Silvio Savarese	09/2011 – 04/2013
	National Chiao Tung University , Hsinchu, Taiwan B.S. in Electronics Engineering Minor in Applied Mathematics	09/2005 – 06/2009
	Carnegie Mellon University , Pittsburgh, PA International Exchange Program	Fall 2008
WORK EXPERIENCE	Google Research , Los Angeles, CA <i>Software Engineering Intern</i> <ul style="list-style-type: none">• Human action detection in videos• Host: Sudheendra Vijayanarasimhan	06/2017 – 09/2017
	Adobe Research , San Jose, CA <i>Computer Vision Research Intern</i> <ul style="list-style-type: none">• Human pose forecasting• Mentors: Jimei Yang, Brian Price, Scott Cohen	06/2016 – 05/2017
	University of Michigan , Ann Arbor, MI <i>Graduate Student Research Assistant (GSRA)</i> <ul style="list-style-type: none">• Visual recognition of human-object interactions• Advisor: Prof. Jia Deng	09/2014 – 04/2016
	DAQRI , Mountain View, CA <i>Research Intern</i> <ul style="list-style-type: none">• 3D scene understanding for augmented reality• Mentors: Chris Broaddus, Wenyi Zhao, Byungsoo Kim	05/2014 – 08/2014
	Stanford University , Stanford, CA <i>Visiting Student Researcher</i> <ul style="list-style-type: none">• 3D layout estimation of indoor scenes• Human group activity recognition• Advisor: Prof. Silvio Savarese	07/2013 – 12/2013
	Academia Sinica , Taipei, Taiwan <i>Research Assistant</i> <ul style="list-style-type: none">• Image classification via sparse representation• Supervised dictionary learning for sparse representation• Mentor: Dr. Yu-Chiang Frank Wang	08/2010 – 07/2011
CONFERENCE PUBLICATIONS	Rethinking the Faster R-CNN Architecture for Temporal Action Localization <i>Computer Vision and Pattern Recognition (CVPR) 2018</i> Yu-Wei Chao, Sudheendra Vijayanarasimhan, Bryan Seybold, David A. Ross, Jia Deng, Rahul Sukthankar	

Learning to Detect Human-Object Interactions

Winter Conference on Applications of Computer Vision (WACV) 2018

Yu-Wei Chao, Yunfan Liu, Xieyang Liu, Huayi Zeng, Jia Deng

Forecasting Human Dynamics from Static Images

Computer Vision and Pattern Recognition (CVPR) 2017

Yu-Wei Chao, Jimei Yang, Brian Price, Scott Cohen, Jia Deng

HICO: A Benchmark for Recognizing Human-Object Interactions in Images

International Conference on Computer Vision (ICCV) 2015

Yu-Wei Chao, Zhan Wang, Yugeng He, Jiakuan Wang, Jia Deng

Mining Semantic Affordances of Visual Object Categories

Computer Vision and Pattern Recognition (CVPR) 2015

Yu-Wei Chao, Zhan Wang, Rada Mihalcea, Jia Deng

Discovering Groups of People in Images

European Conference on Computer Vision (ECCV) 2014

Wongun Choi, Yu-Wei Chao, Caroline Pantofaru, Silvio Savarese

Layout Estimation of Highly Cluttered Indoor Scenes using Geometric and Semantic Cues

International Conference on Image Analysis and Processing (ICIAP) 2013 (Oral, 7.9% acceptance rate)

Yu-Wei Chao, Wongun Choi, Caroline Pantofaru, Silvio Savarese

Understanding Indoor Scenes using 3D Geometric Phrases

Computer Vision and Pattern Recognition (CVPR) 2013 (Oral, 3.2% acceptance rate)

Wongun Choi, Yu-Wei Chao, Caroline Pantofaru, Silvio Savarese

Semantic Structure From Motion with Points, Regions, and Objects

Computer Vision and Pattern Recognition (CVPR) 2012

Sid Ying-Ze Bao, Mohit Bagra, Yu-Wei Chao, Silvio Savarese.

Locality-constrained Group Sparse Representation for Robust Face Recognition

International Conference on Image Processing (ICIP) 2011

Yu-Wei Chao, Yi-Ren Yeh, Yu-Wen Chen, Yuh-Jye Lee, Yu-Chiang Frank Wang

JOURNAL
PUBLICATIONS

Indoor Scene Understanding with Geometric and Semantic Contexts

International Journal of Computer Vision (IJCV) 2015

Wongun Choi, Yu-Wei Chao, Caroline Pantofaru, Silvio Savarese

Locality-Sensitive Dictionary Learning for Sparse Representation Based Classification

Pattern Recognition 2013

Chia-Po Wei, Yu-Wei Chao, Yi-Ren Yeh, Yu-Chiang Frank Wang

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

Google Ph.D. Fellowship

2016 – present

Adobe Travel Grant

07/2017

Qualcomm Innovation Fellowship Finalist

04/2016

Rackham Conference Travel Grant, University of Michigan

05/2015, 07/2017

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

05/2011

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

Fall 2008

Academic Achievement Award, National Chiao Tung University

Spring 2008

PROFESSIONAL SERVICE	<p>Reviewer</p> <ul style="list-style-type: none"> • Transactions on Pattern Recognition and Machine Intelligence (TPAMI) • Computer Vision and Pattern Recognition (CVPR), 2016, 2017, 2018 • International Conference on Computer Vision (ICCV), 2017 • European Conference on Computer Vision (ECCV), 2016, 2018 • International Conference on Intelligent Robots and Systems (IROS), 2016 <p>Student Volunteer</p> <ul style="list-style-type: none"> • IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2013 	
INVITED TALKS	<p>Visual Understanding of Human Actions: Interactions with Objects and Body Dynamics</p> <ul style="list-style-type: none"> • Apple, Cupertino, CA • Nvidia Research, Seattle, WA • Adobe Research, San Jose, CA • Nvidia Research, Santa Clara, CA • Google Research, Mountain View, CA <p>Forecasting Human Dynamics from Static Images</p> <ul style="list-style-type: none"> • Midwest Vision Workshop, HERE, Chicago, IL <p>Recognizing Common Human-Object Interactions</p> <ul style="list-style-type: none"> • Midwest Vision Workshop, Toyota Technological Institute at Chicago 	<p>04/2018</p> <p>04/2018</p> <p>04/2018</p> <p>04/2018</p> <p>02/2018</p> <p>05/2017</p> <p>04/2016</p>
OTHER ACHIEVEMENTS	<p>Contributor to open source projects</p> <ul style="list-style-type: none"> • Caffe: a popular tool for Deep Learning <p>Technology Transfer - Industrial Technology Research Institutes, Hsinchu, Taiwan</p> <ul style="list-style-type: none"> • Sparse Representation Based Face Recognition Technology 	<p>12/2011</p>
SKILLS AND LANGUAGES	<p>Programming Languages: Python, C/C++, UNIX shell scripting, MATLAB, JavaScript, and others</p> <p>Libraries: TensorFlow, Torch, Caffe, OpenCV</p> <p>Operating Systems: Linux, Windows and Mac OS X</p> <p>Languages: English, Chinese (Mandarin), and Taiwanese</p>	