

TZ-YING (GINA) WU

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EDUCATION

- Ph.D. in Electrical and Computer Engineering** *Sep. 2018 - present*
University of California San Diego (UCSD), USA
Advised by Prof. Nuno Vasconcelos, advanced to candidacy.
- Master of Science in Electrical Engineering** *Feb. 2016 - Jan. 2018*
National Tsing Hua University (NTHU), Taiwan
Advised by Prof. Min Sun, GPA: 4.27/4.3
- Bachelor of Science in Electrical Engineering** *Sep. 2012 - Jan. 2016*
National Tsing Hua University (NTHU), Taiwan
GPA: 4.02/4.3, ranking: 10/99 (graduated a half-year earlier)

RESEARCH INTEREST

Computer Vision and Deep Learning

long-tailed recognition, large foundation models, continual learning, taxonomic classification, model calibration, scene understanding, multi-modal fusion, multi-task learning

PUBLICATIONS

- ProTeCt: Prompt Tuning for Hierarchical Consistency** *Preprint*
Tz-Ying Wu*, Chih-Hui Ho*, and Nuno Vasconcelos
- Single-Stage Visual Relationship Learning using Conditional Queries** *NeurIPS 2022*
Alakh Desai, Tz-Ying Wu, Subarna Tripathi, and Nuno Vasconcelos
- Class-Incremental Learning with Strong Pre-trained Models** *CVPR 2022*
Tz-Ying Wu, Gurusurthy Swaminathan, Zhizhong Li, Avinash Ravichandran, Nuno Vasconcelos, Rahul Bhotika and Stefano Soatto
- Learning of Visual Relations: The Devil is in the Tails** *ICCV 2021*
Tz-Ying Wu*, Alakh Desai*, Subarna Tripathi, and Nuno Vasconcelos
- Solving Long-tailed Recognition with Deep Realistic Taxonomic Classifier** *ECCV 2020*
Tz-Ying Wu, Pedro Morgado, Pei Wang, Chih-Hui Ho, and Nuno Vasconcelos
- Explainable Object-induced Action Decision for Autonomous Vehicles** *CVPR 2020*
Yiran Xu, Xiaoyin Yang, Lihang Gong, Hsuan-Chu Lin, Tz-Ying Wu, Yunsheng Li, Nuno Vasconcelos
- Exploit Clues from Views: Self-Supervised and Regularized Learning for Multiview Object Recognition** *CVPR 2020*
Chih-Hui Ho, Bo Liu, Tz-Ying Wu, Nuno Vasconcelos
- Liquid Pouring Monitoring via Rich Sensory Inputs** *ECCV 2018*
Tz-Ying Wu*, Juan-Ting Lin*, Tsun-Hsuang Wang, Chan-Wei Hu, Juan Carlos Nieves, Min Sun

Anticipating Daily Intention using On-Wrist Motion Triggered Sensing *ICCV 2017*
Tz-Ying Wu*, Ting-An Chien*, Cheng-Sheng Chan, Chan-Wei Hu, Min Sun (spotlight presentation)

SKILLS

Programming: Python, C/C++, MATLAB, Verilog, Assembly, HTML, \LaTeX
Library: PyTorch, Tensorflow, Keras, Caffe, OpenCV, Scikit-learn, Numpy, Scipy, Pandas, Matplotlib
System & Tool: Linux, Git, Kubernetes, AWS EC2
Languages: English, Chinese

ACADEMIC SERVICES

Journal Reviewer TPAMI, IJCV, Neurocomputing
Conference Reviewer CVPR (outstanding reviewer in 2022), ICCV, ECCV, NeurIPS, ECCV Imbalance Problems in Computer Vision Workshop
Volunteer CVPR 2020 AC meeting, ICCV 2017, ACCV 2016

WORK EXPERIENCE

Intel AI Lab *Summer 2023*
Machine Learning Research Intern
Working on video understanding and analysis research.

Amazon AWS AI Lab *Summer 2021*
Applied Scientist Intern
Conducted research on large-scale class-incremental learning problems.

IMEC-Taiwan CO. R&D department *Summer 2015*
Signal Processing Intern
Designed and implemented neuron-signal generator, encoder, and decoder framework.

RESEARCH EXPERIENCE

Graduate Student Researcher, Statistical Visual Computing Lab, UCSD *2018 - present*
Working on long-tailed recognition, continual learning and scene understanding problems.

Graduate Research Assistant, Vision Science Lab, NTHU *2016 - 2018*
Developed wearable camera and IOT system with embedded boards.
Conducted deep learning experiments for learning human behaviors using multi-modal fusion.

Undergraduate Research, advised by Prof. Jing-Jia Liou, NTHU *2014 - 2015*
FPGA Design of Accelerators with High-level Evaluation and Synthesis Tools

TEACHING EXPERIENCE

Teaching Assistant, UCSD

Machine Learning for Physical Applications	<i>Spring 2023</i>
Introduction to Machine Learning Algorithms	<i>Winter 2023</i>
Statistical Learning I	<i>Fall 2021, Fall 2022</i>
Elements of Machine Intelligence	<i>Winter 2020</i>
Statistical Learning II	<i>Winter 2019</i>

Teaching Assistant, NTHU

Deep Learning Lab
Signals and Systems
Introduction to Programming (C/C++)

UNITEC - NTHU Summer School 2017
Spring 2016, 2017
Fall 2015

HONORS AND DISTINCTIONS

Amazon Post-Internship Fellowship	<i>Fall 2022</i>
CVPR 2022 Outstanding Reviewer Award	<i>Spring 2022</i>
UCSD Electrical and Computer Engineering Department Fellowship	<i>Fall 2018</i>
Appier Scholarship for attending international conference	<i>Fall 2017</i>
NTHU EECS Scholarship for attending international conference	<i>Fall 2017</i>
CVGIP 2017 Excellent Paper Award	<i>Summer 2017</i>
NTHU EE Admission Scholarship for outstanding students	<i>Fall 2016</i>
NTHU EECS Scholarship for outstanding students	<i>Fall 2014</i>
Jia-Bin Chen Scholarship for outstanding students in EE	<i>Fall 2014</i>
NTHU scholarship for academic excellence	<i>Fall 2013</i>
Breaking records in athletics of NTHU on three occasions	<i>Fall 2012 - Spring 2013</i>

DEMO

Recognition from Hand Cameras: A Revisit with Deep Learning	<i>ACCV 2016</i>
Cheng-Sheng Chan, Ting-An Chien, Tz-Ying Wu , Min Sun	

OTHER EXPERIENCE

Mentor of UCSD Graduate Women in Computing (GradWiC)	<i>Fall 2022 - Present</i>
Mentor of UCSD ECE Summer Research Internship Program	<i>Summer 2019 - 2022</i>
Member of EE student association of academic affair	<i>2014 - 2015, 2012 - 2013</i>
Team leader in the NTHU EE women's basketball team	<i>2014 - 2015</i>
Assisting in holding 2014 NTHU International Week	<i>Spring 2014</i>
Member of NTHU track and field team	<i>2012 - 2013</i>