

# TZ-YING (GINA) WU

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## EDUCATION

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### **Ph.D. in Electrical and Computer Engineering**

*Sep. 2018 - present*

University of California San Diego (UCSD), USA

Advisor: Prof. Nuno Vasconcelos, GPA: 3.88/4.0

### **Master of Science in Electrical Engineering**

*Feb. 2016 - Jan. 2018*

National Tsing Hua University (NTHU), Taiwan

Advisor: 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

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### **Computer Vision and Deep Learning**

long-tailed recognition, continual learning, learning with rejection, taxonomic classification, scene understanding, representation learning, multi-modal fusion, multi-task learning

## PUBLICATIONS

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### **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-Huang 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)

## DEMO

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### **Recognition from Hand Cameras: A Revisit with Deep Learning**

*ACCV 2016*

Cheng-Sheng Chan, Ting-An Chien, **Tz-Ying Wu**, Min Sun

## SKILLS

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**Programming Languages:** Python, C/C++, MATLAB, Verilog, Assembly

**Library & OS:** Caffe, PyTorch, Tensorflow, Numpy, Pandas, Matplotlib, OpenCV, L<sup>A</sup>T<sub>E</sub>X, Linux

**Languages:** English, Chinese

## HONORS AND DISTINCTIONS

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UCSD Electrical and Computer Engineering Department Fellowship *Fall 2018*

Appier Scholarship for attending international conference *Fall 2017*

NTHU EECS Scholarship for attending international conference *Fall 2017*

CVGIP 2017 Excellent Paper Award *Summer 2017*

NTHU EE Admission Scholarship for outstanding students *Fall 2016*

NTHU EECS Scholarship for outstanding students *Fall 2014*

Jia-Bin Chen Scholarship for outstanding students in EE *Fall 2014*

NTHU scholarship for academic excellence *Fall 2013*

Breaking records in athletics of NTHU on three occasions *Fall 2012 - Spring 2013*

## WORK EXPERIENCE

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**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

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**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

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**Teaching Assistant, UCSD**

Statistical Learning I *Fall 2021*

Elements of Machine Intelligence *Winter 2020*

Statistical Learning II *Winter 2019*

## Teaching Assistant, NTHU

Deep Learning Lab

Signals and Systems

Introduction to Programming (C/C++)

*UNITEC - NTHU Summer School 2017*

*Spring 2016, 2017*

*Fall 2015*

## OTHER EXPERIENCE

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Mentor of UCSD ECE Summer Research Internship Program

*Summer 2019, 2020*

Student volunteer

*ACCV 2016, ICCV 2017*

Member of EE student association of academic affair

*2014 - 2015, 2012 - 2013*

Team leader in the NTHU EE womens basketball team

*2014 - 2015*

Assisting in holding 2014 NTHU International Week

*Spring 2014*

Member of NTHU track and field team

*2012 - 2013*