# YAO-HUNG (HUBERT) TSAI

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## RESEARCH INTERESTS

I'm interested in Deep Learning and its applications in Computer Vision, Natural Language Processing, and their intersection.

#### **EDUCATION**

#### Carnegie Mellon University, Pittsburgh, PA, USA

Aug 2016 - Present

- Ph.D. in Machine Learning within School of Computer Science
  - Advisor:

## National Taiwan University, Taipei, Taiwan

Aug 2010 - Jun 2014

- B.S. in Electrical Engineering
  - Department Representative to Receive Undergraduate Diploma
  - Ranked 9 out of 198 with 3 times Presidential Awards (top 5% each semester)
  - Advisor: Dr. Shao-Yi Chien

# **PUBLICATIONS**

#### Conference Publications

- [7] Yao-Hung Hubert Tsai, Yi-Ren Yeh and Yu-Chiang Frank Wang. "Learning Cross-Domain Landmarks for Heterogeneous Domain Adaptation", Computer Vision and Pattern Recognition (CVPR), 2016.
- [6] Yuan-Ting Hsieh\*, Shih-Yen Tao\*, Yao-Hung Hubert Tsai, Yi-Ren Yeh and Yu-Chiang Frank Wang. "Generalized Joint Distribution Adaptation on Heterogeneous Feature Space", *International Conference on Multimedia & Expo (ICME)*, 2016. (\*equal contributions) (Oral Presentation)
- [5] Yao-Hung Hubert Tsai, Yi-Ren Yeh and Yu-Chiang Frank Wang. "Heterogeneous Domain Adaptation with Label and Structure Consistency", International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2016.
- [4] Yao-Hung Hubert Tsai, Cheng-An Hou, Wei-Yu Chen, Yi-Ren Yeh and Yu-Chiang Frank Wang. "Domain-Constraint Transfer Coding for Imbalanced Unsupervised Domain Adaptation", Association for the Advancement of Artificial Intelligence (AAAI), 2016.
- [3] Tzu-Ming Harry Hsu, Wei-Yu Chen, Cheng-An Hou, **Yao-Hung Hubert Tsai**, Yi-Ren Yeh and Yu-Chiang Frank Wang. "Unsupervised Domain Adaptation with Imbalanced Cross-Domain Data", *International Conference on Computer Vision (ICCV)*, 2015.
- [2] Yao-Hung Tsai\*, Hung-Ming Hsu\*, Cheng-An Hou and Yu-Chiang Frank Wang. "Person-specific Domain Adaptation with Applications to Heterogeneous Face Recognition", *International Conference on Image Processing (ICIP)*, 2014. (\*equal contributions)
- [1] Po-Chen Wu, **Yao-Hung Tsai** and Shao-Yi Chien. "Stable Pose Tracking from a Planar Target with an Analytical Motion Model in Real-time Applications", *International Workshop on Multimedia Signal Processing* (MMSP), 2014.

#### **Submitted Journal Publications**

[1] Cheng-An Hou, **Yao-Hung Hubert Tsai**, Yi-Ren Yeh and Yu-Chiang Frank Wang. "Unsupervised Domain Adaptation with Label and Structural Consistency", minor revision in *IEEE Transactions on Image Processing (TIP)*.

## AWARDS & HONORS

#### Presidential Award (3 times), Dept. of EE, NTU

Feb 2011, Sep 2012, Feb 2014

• Awarded to students with the top 5% GPA for that semester

## Dept. Representative to Receive Undergrad Diploma, Dept. of EE, NTU

Jun 2014

• Awarded to students with the top 5% GPA over all semesters

#### Research Experiences

#### Graduate Student Researcher, Carnegie Mellon University

Aug 2016 - Present

- Researching in Deep Learning, Computer Vision, and Natural Language Processing
  - Supervisor:

#### Research Assistant, CITI, Academia Sinica

Sep 2012 - Aug 2014, Aug 2015 - Aug 2016

- Worked on projects for person re-identification, domain adaptation, and zero-shot learning
  - Supervisor: Dr. Yu-Chiang Frank Wang

#### Undergrad Student Researcher, National Taiwan University

Sep 2012 - Jun 2014

- Worked on projects for augmented reality and real-time pose tracking
  - Supervisor: Dr. Shao-Yi Chien

## Work & Teaching Experience

## Teaching Assistant & Mentor, CITI, Academia Sinica

Aug 2015 - Aug 2016

- Mentoring undergrad students for the independent research
  - Works for ICCV and ICME
- Providing Deep Learning tutorial/short course for undergrad students

#### Political Warfare Officer, R.O.C. Air Force

Aug 2014 - Jul 2015

• Compulsory military service in Taiwan

## OTHER AWARDS

## Best Tourism App Award, Chunghwa Telecom Hami Apps Competition

Sep 2014

• Ranked 1 out of 300 teams

# Bronze Medal & Outstanding Paper Award, Altera Innovate Asia FPGA Design Competition

• Invited for an oral presentation

Bronze Medal Award, Taiwan Semiconductor Manufacturing Company (TSMC) Elite Camp

Sep 2012

Sep 2013

• Invited only Taiwan's undergrad students with presidential award

## REFERENCES

#### Dr. Yu-Chiang Frank Wang

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