

# YAO-HUNG (HUBERT) TSAI

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## RESEARCH INTERESTS

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

## EDUCATION

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**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

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### Conference Publications

- [8] Wei-Yu Chen, Tzu-Ming Harry Hsu, **Yao-Hung Hubert Tsai**, Yu-Chiang Frank Wang and Ming-Syan Chen. “Transfer Neural Trees for Heterogeneous Domain Adaptation”, *European Conference on Computer Vision (ECCV)*, 2016.
- [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

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- 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

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- 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

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- Teaching Assistant & Mentor**, CITI, Academia Sinica *Aug 2015 - Aug 2016*
- Mentoring undergrad students for the independent research
    - *Works for ICCV, ECCV, 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

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- 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 *Sep 2013*
- Invited for an oral presentation
- Bronze Medal Award**, Taiwan Semiconductor Manufacturing Company (TSMC) Elite Camp *Sep 2012*
- Invited only Taiwan's undergrad students with presidential award

## REFERENCES

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- Dr. Yu-Chiang Frank Wang**
- Associate Research Fellow, Academia Sinica **☎** +886-2-2787-2300 #2368
- CITI Room 232, Academia Sinica, Taipei, Taiwan **✉** ycwang@citi.sinica.edu.tw
- Dr. Shao-Yi Chien**
- Professor, National Taiwan University **☎** +886-2-3366-3668
- EE2-540, Dept. of EE, National Taiwan University, Taipei, Taiwan **✉** sychien@ntu.edu.tw