

YAO-HUNG (HUBERT) TSAI

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RESEARCH INTERESTS

I work on Deep Learning and its applications.

EDUCATION

Carnegie Mellon University, Pittsburgh, PA, USA

Aug 2016 - May 2021

- Ph.D. in Machine Learning within School of Computer Science
- *Advised by Dr. Ruslan Salakhutdinov*
- GPA: 4.15/4.0

National Taiwan University, Taipei, Taiwan

Aug 2010 - Jun 2014

- B.S. in Electrical Engineering (graduated with Department Honors)
- Undergraduate Ceremony Representative
- GPA: 4.17/4.0

SELECTED PUBLICATIONS

Conference Publications

- [1] Shih-Yen Tao, **Yao-Hung Hubert Tsai**, Yi-Ren Yeh and Yu-Chiang Frank Wang. “Semantics-Preserving Locality Embedding for Zero-Shot Learning”, *British Machine Vision Conference (BMVC)*, 2017.
- [2] 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.
- [3] **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.
- [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.
- [5] 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.
- [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)**
- [7] **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.
- [8] **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)
- [9] 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.

Journal Publications

- [10] Cheng-An Hou, **Yao-Hung Hubert Tsai**, Yi-Ren Yeh and Yu-Chiang Frank Wang. “Unsupervised Domain Adaptation with Label and Structural Consistency”, *IEEE Transactions on Image Processing (TIP)*, 2016.

Pre-Prints

- [11] Chih-Kuan Yeh, **Yao-Hung Hubert Tsai**, Yu-Chiang Frank Wang. “Generative-Discriminative Variational Model for Visual Recognition”, *arXiv:1706.02295*, 2017.
- [12] **Yao-Hung Hubert Tsai**, Liang-Kang Huang, Ruslan Salakhutdinov. “Learning Robust Visual-Semantic Embeddings”, *arXiv:1703.05908*, 2017.

RESEARCH EXPERIENCES

Carnegie Mellon University, Pittsburgh, PA, USA

- **Graduate Research Assistant** *Aug 2016 - May 2021*
 - Researching in Deep Learning and its applications
 - *Advisor: Dr. Ruslan Salakhutdinov*

Microsoft Research, Redmond, WA, USA

- **Research Intern** *May 2017 - Aug 2017*
 - Working on deep generative models
 - *Advisor: Dr. Nebojsa Jojic*

Research Center for Information Technology Innovation, Academia Sinica, Taipei, Taiwan

- **Research Assistant** *Aug 2015 - Aug 2016*
 - Working on projects for person re-identification, domain adaptation, and transfer learning
 - *Advisor: Dr. Yu-Chiang Frank Wang*

National Taiwan University, Taipei, Taiwan

- **Undergrad Student Researcher** *Sep 2012 - Jun 2014*
 - Working on projects for augmented reality and real-time pose tracking
 - *Advisor: Dr. Shao-Yi Chien*

TEACHING EXPERIENCES

Research Center for Information Technology Innovation, Academia Sinica, Taipei, Taiwan

- **Teaching Assistant** *Aug 2015 - Aug 2016*
 - Providing Deep Learning tutorials/short courses for undergrad/grad students

ACADEMIC TALKS

- [1] **Yao-Hung Hubert Tsai** “Learning Visual and Semantic Embeddings for Low-Shot Setting”, *Taiwanese Computer Vision Online Meetup*, May 2017.

ACADEMIC SERVICES

Reviewer:

- ICML 2017, NIPS 2017

SELECTED HONORS & AWARDS

Government Scholarship to Study Abroad (GSSA) , Taiwan Ministry of Education	<i>2016/2017</i>
Undergraduate Ceremony Representative , National Taiwan University	<i>2014</i>
Presidential Awards , National Taiwan University	<i>2011/2012/2014</i>
Best Tourism App Award , Chunghwa Telecom Hami Apps Competition	<i>2014</i>
Bronze Medal & Outstanding Paper Award , Altera Innovate Asia FPGA Design Competition	<i>2013</i>
First Half & Honored Mention , International Physics Olympiad (IPhO) Selection Camp	<i>2009/2010</i>
1st Runner-Up/Third Prize , Regional/National Physics Olympiad for Senior High School	<i>2009</i>