

# YAO-HUNG (HUBERT) TSAI

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🌐 <https://yaohungtsai.github.io>

## RESEARCH INTERESTS

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I work on Deep Learning and its applications.

## EDUCATION

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**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)
- Department Representative to Receive Undergraduate Diploma
- GPA: 4.17/4.0

## PUBLICATIONS

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### Conference Publications

- [9] 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.
- [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] **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.
- [4] 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)**
- [3] **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.
- [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.

### 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”, *IEEE Transactions on Image Processing (TIP)*, 2016.

## Pre-Prints

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

## RESEARCH EXPERIENCES

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**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

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**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

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

## ACADEMIC SERVICES

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**Reviewer:**

- ICML 2017, NIPS 2017

## HONORS & AWARDS

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|--|-------------------------------------|
| <b>Government Scholarship to Study Abroad (GSSA)</b> , Taiwan Ministry of Education              | <i>Sep 2016</i>                     |
| <b>Department Undergrad Diploma Representative</b> , National Taiwan University                  | <i>Jun 2014</i>                     |
| <b>Presidential Award (3 times)</b> , National Taiwan University                                 | <i>Feb 2011, Sep 2012, Feb 2014</i> |
| <b>Best Tourism App Award</b> , Chunghwa Telecom Hami Apps Competition                           | <i>Sep 2014</i>                     |
| <b>Bronze Medal &amp; Outstanding Paper Award</b> , Altera Innovate Asia FPGA Design Competition | <i>Sep 2013</i>                     |
| <b>Bronze Medal Award</b> , Taiwan Semiconductor Manufacturing Company (TSMC) Elite Camp         | <i>Sep 2012</i>                     |