

ZHANG-WEI HONG

32 Vassar St, Cambridge, MA 02139, United States

zwhong@mit.edu ◇ williamd4112.github.io

EDUCATION

Massachusetts Institute of Technology

Ph.D. in Electrical Engineering and Computer Science,

start 2020 - present

Advised by *Prof. Pulkit Agrawal*

National Tsing Hua University

Master in Computer Science,

Overall GPA: 4.22 / 4.3

start 2017 - end 2018

Advised by *Prof. Chun-Yi Lee*

National Tsing Hua University

Bachelor in Computer Science

Overall GPA: 3.95 / 4.3

Major GPA: 4.12 / 4.3

start 2014 - end 2017

PUBLICATIONS

Eric Chen*, Zhang-Wei Hong*, Joni Pajarinen, and Pulkit Agrawal. **Reconciling Intrinsic Rewards via Constrained Policy Optimization**, Accepted at *Conference on Neural Information Processing Systems (NeurIPS) 2022* (* denotes co-first author)

Haokuan Luo, Albert Yue, Zhang-Wei Hong, Pulkit Agrawal. **Stubborn: A Strong Baseline for Indoor Object Navigation**, Accepted at *International Conference on Intelligent Robots and Systems (IROS) 2022*

Zhang-Wei Hong*, Ge Yang*, and Pulkit Agrawal. **Bilinear Value Networks for Multi-goal Reinforcement Learning**, Accepted at *International Conference on Learning Representation (ICLR) 2022* (* denotes co-first author)

Zhang-Wei Hong, Tao Chen, Yen-Chen Lin, Joni Pajarinen, and Pulkit Agrawal. **Topological Experience Replay**, Accepted at *International Conference on Learning Representation (ICLR) 2022*

Chin-Jui Chang, Yu-Wei Chu, Chao-Hsien Ting, Hao-Kang Liu, Zhang-Wei Hong, and Chun-Yi Lee. **Reducing the Deployment-Time Inference Control Costs of Deep Reinforcement Learning Agents via an Asymmetric Architecture**, Accepted by *International Conference on Robotics and Automation (ICRA) 2021*

Zhang-Wei Hong, Prabhat Nagarajan, and Guilherme Maeda, **Periodic Intra-Ensemble Knowledge Distillation for Reinforcement Learning**, Accepted by *European Conference on Machine Learning (ECML) 2021* and *Deep Reinforcement Learning Workshop at Conference on Neural Information Processing Systems (NeurIPS) 2019*

Zhang-Wei Hong, Tsu-Jui Fu, Tzu-Yun Shann, Yi-Hsiang Chang, and Chun-Yi Lee. **Adversarial Active Exploration Strategy for Inverse Dynamics Model Learning**, Accepted as an oral paper by *Conference on Robot Learning (CoRL) 2019*

Zhang-Wei Hong, Tzu-Yun Shann, Shih-Yang Su, Yi-Hsiang Chang, Tsu-Jui Fu, and Chun-Yi Lee. **Diversity-driven Exploration Strategy for Deep Reinforcement Learning**, Accepted as a poster paper by *Conference on Neural Information Processing Systems (NeurIPS) 2018*

Zhang-Wei Hong, Chen Yu-Ming, Shih-Yang Su, Tzu-Yun Shann, Yi-Hsiang Chang, Hsuan-Kung Yang, Brian Hsi-Lin Ho, Chih-Chieh Tu, Yueh-Chuan Chang, Tsu-Ching Hsiao, Hsin-Wei Hsiao, Sih-Pin Lai,

and Chun-Yi Lee **Virtual-to-Real: Learning to Control in Visual Semantic Segmentation**, Accepted as an oral paper by *International Joint Conferences on Artificial Intelligence (IJCAI) 2018*

Zhang-Wei Hong^{*}, Shih-Yang Su^{*}, Tzu-Yun Shann^{*}, Yi-Hsiang Chang, and Chun-Yi Lee. **Deep Policy Inference Q-Network for Multi-Agent Systems**, Accepted as an oral paper by *International Conference on Autonomous Agents and Multiagent Systems (AAMAS) 2018*

Yen-Chen Lin, Zhang-Wei Hong, Yuan-Hong Liao, Meng-Li Shih, Ming-Yu Liu, and Min Sun. **Tactics of adversarial attack on deep reinforcement learning agents**, Accepted as an oral paper by *International Joint Conferences on Artificial Intelligence (IJCAI) 2017*

EXPERIENCE

| | |
|---|-----------------------|
| Research intern , Microsoft Research, Montreal | 2022 Jun. - 2022 Aug. |
| Full-time research assistant , National Tsing Hua University, Taiwan | 2019 Oct. - 2020 Mar. |
| Research intern , Preferred Networks, Japan | 2019 Jun. - 2019 Sep. |
| Engineering intern , Appier, Taiwan | 2019 Feb. - 2019 Jun. |
| Visiting researcher , Advised by <i>Jan Peters</i> , TU Darmstadt, Germany | 2018 Jul. - 2018 Sep. |
| Graduate research assistant , National Tsing Hua University, Taiwan | 2016 Oct. - 2019 Jan. |
| Engineering intern , Mediatek, Taiwan | 2016 Jul. - 2016 Sep. |
| Contract engineer , Industrial Technology Research Institute, Taiwan | 2015 Oct. - 2015 Dec. |

TEACHING

| | |
|--|-----------------------|
| 6.484 - Computational Sensorimotor Learning , MIT, U.S. Textbook drafting | 2022 Feb. - 2022 May. |
| 6.S090 - Deep Learning for Control , MIT, U.S. Lectures of off-policy reinforcement learning | 2021 Jan. |
| Nvidia deep learning institute , Nvidia, Taiwan Hands-on image recognition | 2017 Jul. - 2017 Oct. |

SERVICE

| | |
|--|------------|
| Conference on Neural Information Processing Systems , <i>reviewer</i> | 2022 |
| International Conference on Machine Learning , <i>reviewer</i> | 2021, 2022 |
| Conference on Robot Learning , <i>reviewer</i> | 2021, 2022 |
| International Conference on Intelligent Robots and Systems , <i>reviewer</i> | 2019 |
| Advanced Robotics Journal , <i>reviewer</i> | 2019 |
| Conference on Neural Information Processing Systems , <i>volunteer</i> | 2018 |
| International Joint Conferences on Artificial Intelligence , <i>volunteer</i> | 2018 |

PROJECTS

| | |
|---|-----------------------|
| Nvidia Embedded Intelligent Robot Challenge Develop an intelligent robot using Nvidia Jetson TX1 to solve three tasks: (i) autonomous driving, (ii) object pick-and-place, and (iii) image recognition. | 2016 Jun. - 2016 Sep. |
|---|-----------------------|

SKILLS

- Programming Languages and Frameworks**
- C/C++/C#/Python/Java
 - Message Passing Interface (MPI)/CUDA/OpenGL/Robot Operating System(ROS)

- Tensorflow/PyTorch/Chainer

Languages

- Mandarin (Chinese)

- English

AWARDS AND SCHOLARSHIPS

DAAD & MOST Summer Institute Program Fellowship

Ministry of Science and Technology and Deutscher Akademischer Austausch Dienst

2019

Nvidia Jetson Developer Challenge – 1st prize

Nvidia

2018

Master scholarship

National Tsing Hua University

2017

Nvidia Embedded Intelligent Robotics Challenge - 1st prize

Nvidia

2017

Meichu Hackthon (Microsoft Azure group) - 3rd prize

Microsoft

2015