

Peide Huang

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EDUCATION

Carnegie Mellon University <i>Ph.D. in Mechanical Engineering (SafeAI Lab)</i> <i>M.S. in Machine Learning</i>	05/15/2020 - 12/18/2024 <i>Pittsburgh, PA, US</i>
Stanford University <i>M.S. in Mechanical Engineering (Robotics and Control), GPA: 3.9/4.0</i>	09/24/2018 - 04/02/2020 <i>Stanford, CA, US</i>
Nanyang Technological University, Singapore <i>B.E. in Aerospace Engineering with Highest Distinction, GPA: 4.9/5.0</i>	08/15/2014 - 06/14/2018 <i>Singapore</i>

WORK EXPERIENCE

Google DeepMind <i>Research Scientist, Robotics</i>	09/29/2025 - Now <i>Mountain View, CA, US</i>
Apple <i>Research Scientist, Robotics</i>	05/28/2024 - 09/26/2025 <i>Cupertino, CA, US</i>
Bosch Center for Artificial Intelligence <i>Machine Learning Research Intern</i>	05/15/2023 - 08/25/2023 <i>Pittsburgh, PA, US</i>
Flexiv Robotics Ltd. <i>System Engineer Intern</i>	06/17/2019 - 09/20/2019 <i>Santa Clara, CA, US</i>

SELECTED PUBLICATIONS

* indicates equal contribution.

- EgoDex: Learning Dexterous Manipulation from Large-Scale Egocentric Video**
Ryan Hoque*, **Peide Huang***, David J. Yoon*, Mouli Sivapurapu, Jian Zhang
Preprint ([Best Paper Award at RSS2025 EgoAct Workshop](#))
- ELEGNT: Expressive and Functional Movement Design for Non-anthropomorphic Robot**
Yuhan Hu, **Peide Huang**, Mouli Sivapurapu, Jian Zhang.
Preprint
- EMOTION: Expressive Motion Sequence Generation for Humanoid Robots with In-Context Learning**
Peide Huang, Yuhan Hu, Nataliya Nechyporenko, Daehwa Kim, Walter Talbott, Jian Zhang.
IEEE Robotics and Automation Letters (RA-L)
- CaDRE: Controllable and Diverse Generation of Safety-Critical Driving Scenarios using Real-World Trajectories**
Peide Huang, Wenhao Ding, Jonathan Francis, Bingqing Chen, Ding Zhao.
2025 IEEE International Conference on Robotics and Automation (ICRA 2025)
- Dynamics as Prompts: In-Context Learning for Sim-to-Real System Identifications**
Xilun Zhang*, Shiqi Liu*, **Peide Huang**, William Jongwon Han, Yiqi Lyu, Mengdi Xu, Ding Zhao.
IEEE Robotics and Automation Letters (RA-L)
- Gradient Shaping for Multi-Constraint Safe Reinforcement Learning**
Yihang Yao, Zuxin Liu, Zhepeng Cen, **Peide Huang**, Tingnan Zhang, Wenhao Yu, Ding Zhao.
6th Annual Learning for Dynamics & Control Conference (L4DC 2024)

7. **Creative Robot Tool Use with Large Language Models**
Mengdi Xu*, **Peide Huang***, Wenhao Yu*, Shiqi Liu, Xilun Zhang, Yaru Niu, Tingnan Zhang, Fei Xia, Jie Tan, Ding Zhao.
Preprint
8. **What Went Wrong? Closing the Sim-to-Real Gap via Differentiable Causal Discovery**
Peide Huang, Xilun Zhang*, Ziang Cao*, Shiqi Liu*, Mengdi Xu, Wenhao Ding, Jonathan Francis, Bingqing Chen, Ding Zhao
7th Conference on Robot Learning (CoRL 2023)
9. **Continual Vision-based Reinforcement Learning with Group Symmetries**
Shiqi Liu*, Mengdi Xu*, **Peide Huang**, Yongkang Liu, Kentaro Oguchi, Ding Zhao
7th Conference on Robot Learning (CoRL 2023) (**Oral, 6.6%**)
10. **Group Distributionally Robust Reinforcement Learning with Hierarchical Latent Variables**
Mengdi Xu, **Peide Huang**, Yaru Niu, Visak Kumar, Jieliu Qiu, Chao Fang, Kuan-Hui Lee, Xuewei Qi, Henry Lam, Bo Li, Ding Zhao.
The 26th International Conference on Artificial Intelligence and Statistics (AISTATS 2023)
11. **Curriculum Reinforcement Learning using Optimal Transport via Gradual Domain Adaptation**
Peide Huang, Mengdi Xu, Jiacheng Zhu, Laixi Shi, Fei Fang, Ding Zhao.
The 36th Conference on Neural Information Processing Systems (NeurIPS 2022)
12. **Robust Reinforcement Learning as a Stackelberg Game via Adaptively-Regularized Adversarial Training**
Peide Huang, Mengdi Xu, Fei Fang, Ding Zhao.
The 31st International Joint Conference on Artificial Intelligence (IJCAI 2022).
13. **Scalable Safety-Critical Policy Evaluation with Accelerated Rare Event Sampling**
Mengdi Xu, **Peide Huang**, Fengpei Li, Jiacheng Zhu, Xuewei Qi, Kentaro Oguchi, Zhiyuan Huang, Henry Lam, and Ding Zhao.
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2022).
14. **Cardiac Disease Diagnosis on Imbalanced Electrocardiography Data Through Optimal Transport Augmentation**
Jielin Qiu, Jiacheng Zhu, Mengdi Xu, **Peide Huang**, Michael Rosenberg, Douglas Weber, Emerson Liu, Ding Zhao
2023 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2023)
15. **Trustworthy Reinforcement Learning Against Intrinsic Vulnerabilities: Robustness, Safety, and Generalizability**
Peide Huang*, Mengdi Xu*, Zuxin Liu*, Wenhao Ding, Zhepeng Cen, Bo Li, Ding Zhao.
Preprint
16. **Multimodal Representation Learning of Cardiovascular Magnetic Resonance Imaging**
Jielin Qiu*, **Peide Huang***, Makiya Nakashima, Jaehyun Lee, Jiacheng Zhu, Wilson Tang, Pohao Chen, Christopher Nguyen, Byung-Hak Kim, Debbie Kwon, Douglas Weber, Ding Zhao, David Chen.
Preprint

SERVICES

Conference Reviewer	NeurIPS, ICML, ICLR, CoRL, RLC, AISTATS, RLC, ICASSP, CVPR
Journal Reviewer	RA-L, TPAMI, IJCV