
EDUCATION

- **University of Southern California** Los Angeles, CA
PhD in Computer Science with Joseph Lim, GPA: 4.0/4.0 since Aug. 2018
- **University of Pennsylvania** Philadelphia, PA
Fulbright Visiting Scholar in Computer Science; GPA: 4.0/4.0 Aug. 2017 – May 2018
- **Technical University Dresden** Dresden, Germany
Diploma in Electrical Engineering, GPA: 4.0/4.0 (with distinction) Aug. 2012 – Aug. 2017

PUBLICATIONS

- K. Pertsch**, Y. Lee, Y. Wu, J. Lim, 'Demonstration-Guided Reinforcement Learning with Learned Skills', *Conference on Robot Learning (CoRL)*, 2021. arxiv.org/abs/2107.10253
- K. Pertsch**, Y. Lee, J. Lim, 'Accelerating Reinforcement Learning with Learned Skill Priors', *Conference on Robot Learning (CoRL)*, 2020 (**Plenary Talk, top 4%**). arxiv.org/abs/2010.11944
- J. Yamada*, Y. Lee*, G. Salhorda, **K. Pertsch**, M. Pflueger, G. Sukhatme, J. Lim, P. Englert, 'Motion Planner Augmented Reinforcement Learning for Robot Manipulation in Obstructed Environments', *Conference on Robot Learning (CoRL)*, 2020. arxiv.org/abs/2010.11940
- K. Pertsch***, O. Rybkin*, F. Ebert, C. Finn, D. Jayaraman, S. Levine, 'Long-Horizon Visual Planning with Goal-Conditioned Hierarchical Predictors', *Neural Information Processing Systems (NeurIPS)*, 2020. arxiv.org/abs/2006.13205
- K. Pertsch***, O. Rybkin*, J. Yang, K. G. Derpanis, J. Lim, K. Daniilidis, A. Jaegle, 'Keyframing the Future: Keyframe Discovery for Visual Prediction and Planning', *Conference on Learning Dynamics for Control (L4DC)*, 2020. arxiv.org/abs/1904.05869
- O. Rybkin*, **K. Pertsch***, K. G. Derpanis, K. Daniilidis, A. Jaegle, 'Learning what you can do before doing anything', *International Conference on Learning Representations (ICLR)*, 2019. openreview.net/forum?id=SylPMnR9Ym
- O. H. Jaffari*, S. K. Mustikovela*, **K. Pertsch**, E. Brachmann, C. Rother, 'iPose: Instance-Aware 6D Pose Estimation of Partly Occluded Objects', *Asian Conference on Computer Vision (ACCV)*, 2018. arxiv.org/abs/1712.01924

EXPERIENCE

- **CLVR Lab, University of Southern California** Los Angeles, CA
Research Assistant, Supervisor: Joseph Lim since August 2018
 - **Transfer Learning from Large, Offline Datasets**: Improve learning efficiency on downstream tasks by leveraging large, unstructured experience datasets, e.g. via skill transfer.
 - **Visual Model-based Planning and Control**: Learn hierarchical predictive models for planning and control from raw image observations.
- **RAIL Lab, UC Berkeley** Berkeley, CA
Visiting Researcher, Supervisor: Sergey Levine Feb. 2019 - Jul. 2019
 - **Hierarchical Prediction Models for Visual Planning**: Long-horizon, goal-conditioned planning with a recursive, tree-structured prediction model.
- **GRASP Lab, University of Pennsylvania** Philadelphia, PA
Fulbright Visiting Scholar, Supervisor: Kostas Daniilidis Aug. 2017 - May 2018
 - **Unsupervised Learning of Action Representations**: Learn a representation of an agent's action space via variational video prediction just from raw videos & perform action conditioned video prediction + visual servoing.

- **Computer Vision Lab Dresden** Dresden, Germany
Diploma Thesis, Supervisor: Carsten Rother Apr. 2017 - Aug. 2017
 - **Object Pose Estimation:** Design, implement and test a pipeline for 6DoF pose estimation of objects from single RGB/RGB-D input images. Used dataset features texture-less objects and heavy occlusion.
- **Institute of Automotive Engineering Dresden** Dresden, Germany
Research Assistant, Supervisor: Bernard Bäker Apr. 2016 - Jan. 2017
 - **Reinforcement Learning:** Develop a Reinforcement Learning framework for learning energy-optimal driving strategies for hybrid-electric vehicles.

SCHOLARSHIPS AND AWARDS

- **Best Paper Runner-Up Award:** at the Robot Learning Workshop @ NeurIPS 2020. Dec. 2020
- **Best Paper Presentation Award:** at the Conference for Robot Learning (CoRL), 2020. Nov. 2020
- **Fulbright Scholarship:** Awarded by the US government for academic excellence and social commitment. Aug. 2017
- **Best Diploma in EE@TU Dresden:** Awarded by the Faculty of Electrical and Computer Engineering. Aug. 2017
- **Year's Best Pre-Diploma:** Awarded by the Faculty of Electrical and Computer Engineering. Aug. 2014
- **Deutschlandstipendium:** National scholarship for outstanding academic achievements. Oct. 2013 - Sep. 2017

TALKS

- **Stanford Vision&Learning Lab:** *Accelerating Reinforcement Learning with Learned Skill Priors.* [\[Slides\]](#) Jul. 2021
- **PAL Lab @ UPenn:** *A Scalable Framework for Skill-Based Learning with Offline Datasets.* Jun. 2021

REVIEWING SERVICE

- Conference on Robot Learning (CoRL), 2021.
- International Conference on Machine Learning (ICML), 2021. *Expert Reviewer.*
- International Conference on Robotics and Automation (ICRA), 2021.
- International Conference on Learning Representations (ICLR), 2021.
- Neural Information Processing Systems (NeurIPS), 2020.
- International Conference on Machine Learning (ICML), 2020. *Top Reviewer Certificate.*
- International Conference on Learning Representations (ICLR), 2020.
- IEEE conference on Computer Vision and Pattern Recognition (CVPR), 2019.
- International Conference on Computer Vision (ICCV), 2019.