

16-848 Reference List for April 17, 2024

We focused on the following paper:

Xu, Jie, Tao Chen, Lara Zlokapa, Michael Foshey, Wojciech Matusik, Shinjiro Sueda, and Pulkit Agrawal. "An end-to-end differentiable framework for contact-aware robot design." *arXiv preprint arXiv:2107.07501* (2021). <http://diffhand.csail.mit.edu/>

The research projects I described first can be found here:

Hazard, Christopher, Nancy Pollard, and Stelian Coros. "Automated design of robotic hands for in-hand manipulation tasks." *International Journal of Humanoid Robotics* 17, no. 01 (2020): 1950029.

http://graphics.cs.cmu.edu/nsp/papers/Automated_Design_Robot_Hands_IJHR2020.pdf

Meixner, Andre, Christopher Hazard, and Nancy Pollard. "Automated Design of Simple and Robust Manipulators for Dexterous In-Hand Manipulation Tasks using Evolutionary Strategies." In *2019 IEEE-RAS 19th International Conference on Humanoid Robots (Humanoids)*, pp. 281-288. IEEE, 2019.

<http://graphics.cs.cmu.edu/nsp/papers/MeixnerHumanoids2019.pdf>

The miscellaneous projects I mentioned can be found here:

Mordatch, Igor, Zoran Popović, and Emanuel Todorov. "Contact-invariant optimization for hand manipulation." In *Proceedings of the ACM SIGGRAPH/Eurographics symposium on computer animation*, pp. 137-144. 2012.

<https://homes.cs.washington.edu/~todorov/papers/MordatchSCA12.pdf>

<https://www.youtube.com/watch?v=Gzt2UoxYfAQ>

Liu, C. Karen. "Dextrous manipulation from a grasping pose." In *ACM SIGGRAPH 2009 papers*, pp. 1-6. 2009.

<https://dl.acm.org/doi/abs/10.1145/1576246.1531365>

(see the supplemental video at the given ACM paper link)