

16-848 Spring 2020: Reference List for April 13th

We started by following up on this paper, showing how grip point adjustment is done entirely kinematically.

Sundaralingam, Balakumar, and Tucker Hermans. "Geometric in-hand regrasp planning: Alternating optimization of finger gaits and in-grasp manipulation." In *2018 IEEE International Conference on Robotics and Automation (ICRA)*, pp. 231-238. IEEE, 2018. <https://ieeexplore.ieee.org/abstract/document/8460496>
https://www.youtube.com/watch?v=-ML2vwo_850

I then showed the match striking video we had discussed in class last week:

<https://www.youtube.com/watch?v=0Lfj3M3Kn80>
<https://www.youtube.com/watch?v=HH6QD0MgqDQ> (anaesthesia)
<https://www.youtube.com/watch?v=zGIDptsNZMo> (normal)

We went on to cover Michael Koval's research on dealing with uncertainty in some detail. The majority of what we talked about is covered in these papers:

Koval, Michael C., Nancy S. Pollard, and Siddhartha S. Srinivasa. "Pose estimation for planar contact manipulation with manifold particle filters." *The International Journal of Robotics Research* 34, no. 7 (2015): 922-945.
https://www.ri.cmu.edu/pub_files/2015/6/koval_ijrr2015a.pdf

Koval, Michael C., Nancy S. Pollard, and Siddhartha S. Srinivasa. "Pre-and post-contact policy decomposition for planar contact manipulation under uncertainty." *The International Journal of Robotics Research* 35, no. 1-3 (2016): 244-264.
https://www.ri.cmu.edu/pub_files/2015/8/koval_ijrr2015b.pdf

Koval, Michael C., Nancy S. Pollard, and Siddhartha S. Srinivasa. "Configuration Lattices for Planar Contact Manipulation Under Uncertainty," Proceedings of the Workshop on the Algorithmic Foundations of Robotics (WAFR), San Francisco, December 2016.
<http://graphics.cs.cmu.edu/nsp/papers/KovalWAFR2016.pdf>

If you have ideas on extending it all to dexterous manipulation, we should talk about it.