Discussion Session w. 45

- Topics for discussion session w. 45:
  Learning by human demonstration, segmentation, and mixture models

Literature:

- Billard, A., Calinon, S., Dillmann, R., & Schaal, S.: "Robot Programming by Demonstration", Chapter 59 in *Springer Handbook of Robotics*, Eds. Siciliano, B., & Khatib, O., Springer Verlag, Berlin Heidelberg, 2008.
- Lee, S. H., Suh, I. H., Calinon, S., & Johansson, R.: "Autonomous framework for segmenting robot trajectories of manipulation task", *Autonomous Robots*, 2014.
- Kim, S., Shukla, A., & Billard, A.: "Catching Objects in Flight", *IEEE Transactions on Robotics*, Vol. 30, No. 5, pp. 1049–1065, 2014.

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Discussion Session w. 45 (cont'd)

Literature (cont'd):

- Kronander, K., & Billard, A.: "Learning Compliant Manipulation through Kinesthetic and Tactile Human-Robot Interaction", *IEEE Transactions on Haptics*, Vol. 7, No. 3, pp. 367–380, 2014.
- Chapter 11 in [Murphy, 2011] on Mixture Models.

Simulation task:

- Implement an algorithm of your choice for segmenting robot trajectories. Evaluate the algorithm on the assembly data provided by Andreas (available on the course homepage), or a data set from this homepage: `http://programming-by-demonstration.org`.

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