We started by looking at the monkey experiments from Sam Clanton’s thesis from 2011. You can find his dissertation here: https://www.ri.cmu.edu/publications/brain-computer-interface-control-of-an-anthropomorphic-robotic-arm/

You can find videos of the monkey experiments here: https://motorlab.pitt.edu/multimedia.php

We then turned to the following paper from Andy Schwartz’s group that shows results from a long series of experiments with a single human subject with a cortical implant.

https://iopscience.iop.org/article/10.1088/1741-2560/12/1/016011

The supplementary videos that I showed today are all available from the publication web page.

We talked about how a lot of follow on work focuses on shared autonomy. This nice paper by Katharina Muelling is one example:

https://link.springer.com/article/10.1007/s10514-017-9622-4
https://www.youtube.com/watch?v=adUCJh_ySrU

The following paper is a survey article containing interesting research related to BCI developments, some of them very recent.

We spoke about alternative techniques, including SEEG (minimally invasive) and EEG (noninvasive). Here is an example of robot control with an EEG interface.

http://www2.informatik.uni-freiburg.de/~kuhnerd/neurobots/