

# High-dimensional model estimation and model selection

*Thursday, 12 November 2015 14:00 (45 minutes)*

I will review concepts and algorithms from high-dimensional statistics for linear model estimation and model selection. I will particularly focus on the so-called  $p \gg n$  setting where the number of variables  $p$  is much larger than the number of samples  $n$ . I will focus mostly on regularized statistical estimators that produce sparse models. Important examples include the LASSO and its matrix extension, the Graphical LASSO, and more recent non-convex methods such as the TREX. I will show the applicability of these estimators in a diverse range of scientific applications, such as sparse interaction graph recovery and high-dimensional classification and regression problems in genomics.

**Presenter:** MUELLER, Christian (Simons Foundation)

**Session Classification:** Symposium