

**40144 STATISTICAL THEORY II**

Instructors: Botond Szabo

Part A: Contraction pt 2

- Keywords: asymptotics of MLE, Cramer-Rao bounds, Bernstein-von-Mises, Bayesian contraction rates, contraction for Gaussian process regression

Part B: high-dimensional regression, covariance and precision estimation

Keywords: lasso, non-convex optimization approaches, covariance estimation and some asymptotic theory, precision matrices and Gaussian graphical models)

Part C: theory for high-dimensional statistical problems

Keywords: concentration inequalities, theory for lasso, covariance estimation, Bayesian variable selection

Part D: variational methods and related theory

Keywords: variational Bayes, contraction rates, applications