

Statistical Inference III – Syllabus AA 2018/19

Prof. Emanuele Dolera

Lesson 1: Asymptotic theory in Parametric Inference. Asymptotic Efficiency and the Information Inequality. Consistency, Asymptotic Normality and Asymptotic Efficiency of MLEs

Lesson 2: U-Statistics. Unbiasedness. Martingale structure and Hoeffding decomposition. Asymptotic properties of U-Statistics. Large and Moderate deviations for U-Statistics.

Lesson 3: von Mises Calculus. Basic scheme for the analysis. Asymptotic properties of differentiable statistical functions. Examples.

Lesson 4: M and L-estimators. Asymptotic properties and connection with von Mises Calculus.

Lesson 5: Likelihood Ratios. Asymptotic behavior of the LR test statistics. Wilks Theorem.