

# EC824A

## Introduction

Department of Economics  
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- Theoretical approach: economics, and especially econometrics, is a quantitative field - expect some technical rigour in these notes
- EC824 split into two parts:
  1. EC824A: “Classic” asymptotic theory
  2. EC824B: High-dimensional methods
- In my opinion *all* PhD economists should know EC824A!
- EC824B is closer to the frontier:
  - ▶ applied researchers should be familiar with these methods to implement them
  - ▶ theorists should get familiar with the proof techniques

# Asymptotic Theory

- I thank Antonio Galvao for these notes!
- The first collection of notes are preliminary and we do not focus on them - they are used as supplementary
- Start with asymptotic theory for many estimator types you have come across already - MLE, LS, GMM, MD, TS
- Time permitting: Then focus on nonparametric estimation for e.g. density estimation, nonparametric regression, and quantile regression.

## Assessment

- Take home exams worth 50%
- Asymptotic theory, taken in mid-term break