Master-Course on:

Topics in Time Series Analysis and Forecasting

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1. **Inference in VAR systems**
   1.1. Traditional concepts (Choleski, AB-models)
   1.2. Identification based on long-run restrictions
   1.3. Sign restrictions
   1.4. Variance shifts

2. **Testing for Causality**
   2.1. Traditional Tests
   2.2. Short- and long-run causality
   2.3. Testing for causality using non-stationary time series

3. **Forecasting and macroeconomic Analysis using factor models**
   3.1. Principal component estimator and alternative methods
   3.2. Determining the number of Factors
   3.3. Forecasting macroeconomic variables
   3.4. Factor-augmented VAR model (FAVAR)

4. **Forecast evaluation**
   4.1. Diebold-Mariano test
   4.2. Comparing nested models
   4.3. Giacomini/White approach
   4.4. Forecast encompassing tests