

Economics7828

Spring2021

Prof. Xiaodong Liu

Office: Econ202

Voice: 303492-7414

Email: xiaodong.liu@colorado.edu

Location: 9.94 : 1. Davidson, J., 2000,

2. Cameron A. C. and P. K. T
Press

2. Statistical Properties of Ordinary Least Squares
 - a. Unbiasedness
 - b. Consistency, asymptotic normality and efficiency
 - c. Residuals and error terms
 - d. Misspecification
 - e. Goodness of fit
3. Hypothesis Testing and Confidence Intervals
 - a. Exact tests in the classical linear model
 - b. Large sample tests
 - c. Exact and asymptotic confidence intervals and confidence regions
 - d. Heteroskedasticity consistent covariance matrices
 - e. The delta method
4. Nonlinear Regression
 - a. Method of moments estimators for nonlinear models
 - b. Nonlinear least squares
 - c. The Gauss-Newton Regression
 - d. One-Step Estimation
 - e. Hypothesis testing
5. Generalized Least Squares
 - a. GLS and feasible GLS estimators
 - b. Heteroskedasticity
 - c. Autoregressive and moving average processes
 - d. Testing for serial correlation
 - e. Panel data models
6. Instrumental Variables Estimation
 - a. Instrumental variables
 - b. Statistical properties of IV estimators
 - c. Hypothesis testing
 - d. Testing overidentifying restrictions
 - e. DWH tests
 - f. IV estimation of nonlinear models
7. The Generalized Method of Moments
 - a. GMM estimators for linear regression models
 - b. GMM estimation with heteroskedasticity of unknown form
 - c. Fully efficient GMM estimation

Religious Holidays

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. [See the policy regarding religious observances](#) for full details.