

Syllabus
ECON 6498-001: Topics in Econometrics
FALL 2018

Instructor: Jungbin Hwang, Email and office : jungbin.hwang@uconn.edu and OAK 333

Time and Location: Wed 2:00PM - 4:30PM and OAK 308

Office Hours and Location: Monday/Thursday 1:00pm - 2:00pm and OAK 333

Description of the Course

This is the second half of the class after Professor Min Seong Kim's lectures on non-parametric kernel methods and related applications to economic/time series data. My role is introducing another popular tools in non-parametric econometrics- "*non-parametric sieve estimator*". The first lecture on Oct 31st starts by studying a series estimator in Newey (1997) as a (popular) special case of the sieve methods. Here is also a list of references:

1. Ai C, Chen X. Efficient estimation of models with conditional moment restrictions containing unknown functions. *Econometrica*. 2003 Nov 1;71(6):1795-843.
2. Donald SG, Newey WK. Choosing the number of instruments. *Econometrica*. 2001 Sep 1;69(5):1161-91.
3. Newey WK. Convergence rates and asymptotic normality for series estimators. *Journal of econometrics*. 1997 Jul 1;79(1):147-68.
4. Newey WK, Powell JL. Instrumental variable estimation of nonparametric models. *Econometrica*. 2003 Sep;71(5):1565-78.

In the first two lectures, I will carefully go over concepts and detailed proofs in [3]. Next direction toward more advanced topics in [4], [2], and [1] is still up in the air, and will depend on students' (and my) progress of understanding the fundamental ideas. Mainly, after he/she trains hard in the course, I expect a student (and I) feel more comfortable/confident reading econometrics literature on non-parametric methods such as

5. Akerberg D, Chen X, Hahn J, Liao Z. Asymptotic efficiency of semiparametric two-step GMM. *Review of Economic Studies*. 2014 Apr 14;81(3):919-43.
6. Chen, X., Favilukis, J., Ludvigson, S.C., 2013. An estimation of economic models with recursive preferences. *Quantitative Economics* 4, 39–83.
7. Christensen TM. Nonparametric stochastic discount factor decomposition. *Econometrica*. 2017 Sep;85(5):1501-36.
8. Lee J, Robinson PM. Series estimation under cross-sectional dependence. *Journal of Econometrics*. 2016 Jan 1;190(1):1-7.