

# **Empirical Environmental Economics using Applied Econometric Methods.**

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## **Course Description**

This course aims at equipping students with empirical economic methods and econometric tools to analyze reduced form environmental issues. This course combines a little of theoretical analysis with more major discussions on the empirical issues to identify specific research designs (Differences-in-Differences, Triple Differences, Regression Discontinuity, Instrumental Variables) to analyze environmental policies as applied to air pollution, energy, climate change and human health issues. Student participation is key to the course. By going through the recent applied literature, students are expected to critically read and discuss articles and be able to summarize findings and the pros and cons of different identification strategies.

## **Outline**

### **Lecture 1: Empirical hedonics**

Bockstael & McConnell, Chapter 6, p. 151 to 188.

Bockstael, Nancy E., McConnell, Kenneth E. (2007): Environmental and Resource Valuation with Revealed Preferences: A Theoretical Guide to Empirical Models. Springer.

Albouy, D., W. Graf, R. Kellogg and H. Wolff (2016): "Climate Amenities, Climate Change and American Quality of Life". Journal of the Association of Environmental and Resource Economists, Vol. 3(1). pp. 205–246.

### **Lecture 2: Empirical traffic restrictions**

Watkins, K. and H. Wolff (2013): Analysis of Heterogeneous Speeding Behavior. Transportation Research Record: Journal of the Transportation Research Board, Vol. 2375, pp. 29-36. Doi: 10.3141/2375-04.

Wolff, H. (2014) "Keep Your Clunker in the Suburb: Low Emission Zones and Adoption of Green Vehicles", *Economic Journal*, Vol. 124(578), pp. F481-F512.

Wolff, H. (2014) "Value of Time: Speeding Behavior and Gas Prices", *Journal of Environmental Economics and Management*, Vol. 67(1), pp. 71-88.

Wolff, H. and L. Perry: (2010): "Trends in Clean Air Legislation in Europe: Particulate Matter and Low Emission Zones". *Review of Environmental Economics and Policy*. 4(2), pp. 293-308.

### **Lecture 3: Empirical air pollution and energy**

Kellogg, R. and H. Wolff (2008): "Daylight Time and Energy: Evidence from an Australian Experiment", *Journal of Environmental Economics and Management*, 56, pp. 207-20, lead article. Recipient of the 2009 JEEM best paper award.

Reid Johnsen, Jacob LaRiviere. and Hendrik Wolff (2017): *Fracking, Coal and Air Pollution*, Working Paper.