SYLLABUS

A Unified Framework for Defining, Identifying, and Estimating Causal Effects

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Class web page: http://econ.ucsd.edu/coursework/W09_229/file/html/W09_229.html

Overview: This course will discuss recent work providing theoretical foundations for defining, identifying, and estimating well-defined causal effects in general (e.g., non-separable) systems of structural equations. The "Settable system" approach embodying these foundations unites a variety of complementary but not fully compatible approaches to the study of causal effects in non-experimental data, including the classical structural equations approach of the Cowles Commission, methods of modern labor econometrics and related methods of the treatment effect literature, and structural methods developed in the Artificial Intelligence literature.

The lectures will be drawn from material in the following papers:

W: H. White (2006), "Approximate Nonlinear Forecasting Methods," in Elliott, Granger, and Timmermann (eds.), *Handbook of Economic Forecasting*. Amsterdam: Elsevier.

WC1: H. White and K. Chalak (2006), "A Unified Framework for Defining and Identifying Causal effects," UCSD Department of Economics Working Paper.

WC2: H. White and K. Chalak(2008), "Settable Systems: An Extension of Pearl's Causal Model with Optimization, Equilibrium and Learning," UCSD Department of Economics Working Paper.

CW: K. Chalak and H. White (2006), "An Extended Class of Instrumental Variables for the Estimation of Causal Effects," UCSD Department of Economics Working Paper.