

A GCEP Masterclass

Dynamic Programming–Theory, Computation and Empirical Applications

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June 5-6, 2017

This course will focus on the empirical application of dynamic programming (DP) models. It will present state of the art methods for solving and simulating DP models and estimating them econometrically. The course will also provide many empirical applications to illustrate how these tools and methods are used in practice. In particular, the course will examine the formulation and solution of dynamic equilibrium models and dynamic games and provide state of the art algorithms for finding equilibria and simulating and estimating such models. It will also discuss a growing line of research on behavioural models and ways to deal with some of the limitations of models of "full rationality". These include the curse of dimensionality, the identification problem, and the problem of multiplicity of equilibria.

Location

Georgetown University School of Continuing Studies,
640 Massachusetts Ave NW, Washington DC 20001
Room: C224

Program

Day One: Monday, June 5, 2017

10:30 – 11:00am	<i>Registration, Breakfast and Coffee</i>
11:00 – 12:30pm	Lecture 1: Introduction to Dynamic Programming and Structural Estimation
12:30 – 1:30pm	<i>Lunch</i>
1:30 – 3:00pm	Lecture 2: Discrete Decision Problems: Alternative Approaches to Structural Estimation
3:00- 3:30pm	Coffee Break
3:30- 5:00pm	Lecture 3: Empirical Application of discrete decision problems: Demand for Cars

Day Two: Tuesday, June 6, 2017

9:00 – 9:30am	Breakfast and Coffee
9:30 – 11:00am	Lecture 4: Continuous and discrete-continuous decision problems

11:00- 11:15am	Coffee Break:
11.15 – 12.45pm	Lecture 5: Empirical Applications of discrete-continuous decision problems: Consumption and Savings, Labor supply and Retirement
12:45 – 1:45pm	<i>Lunch</i>
1:45 – 3:15pm	Lecture 6 and 7: Solving and estimating games of incomplete information
3:15- 3:30pm	Coffee Break
3:30- 5:00pm	Lecture 6 and 7 (continued)