

# The 3<sup>rd</sup> Annual Health Econometrics Workshop

September 29 – October 1, 2011

**CAMPUS CLUB**

**UNIVERSITY OF MINNESOTA**

Twin Cities, MN



## ***The Annual Health Econometrics Workshop***

**The annual health econometrics workshop (AHEW) provides a forum to discuss the use of econometric and other quantitative methods to address issues in health economics and policy, health services research, and outcomes research. It is the first series of meetings of its kind in North America and facilitates the exchange of ideas among the growing health econometrics community.**

**The format of the workshop will follow the traditional structure of the American Health Economics Conference (AHEC), National Bureau of Economic Research (NBER) Conferences, and the European Workshops on Econometrics and Health Economics (i) a nominated discussant presents and appraises the paper, (ii) the author(s) responds, and (iii) open discussion follows. Each paper will be allotted one hour.**

**Participation in the workshop is by invitation only.**

**W**elcome to the 2011 (3rd) Annual Health Econometrics Workshop. The workshop will be held at the Campus Club , University of Minnesota, Twin Cities MN, from Sep 29 – Oct 1, 2011. After a great response to and success in the last two workshops, we received nearly twenty-one highly qualified papers this year. Due to time constraints, we were able to include only 11 papers in the program. We would like to thank our discussants for taking the time to present these papers at the workshop. Their insights into the econometric issues are the highlight of the program. We also thank Professor William Greene of New York University for agreeing to deliver the key-note speech of the conference.

This year we will also host a pre-conference session titled “Training, Teaching and Mentoring in Health Econometrics” on September 29, 2011. The session will be targeted towards early-career health economists and doctoral students.

We gratefully acknowledge the support of our sponsors, I3 Innovus, Mayo Clinic, Pfizer Inc, StataCorp, and the University of Minnesota, School of Public Health, without whom this conference would not be possible.

We hope you will find the workshop stimulating. See you all in September!

#### Organizing Committee

**Anirban Basu**, University of Chicago

**Partha Deb**, Hunter College , CUNY

**Bryan Dowd**, University of Minnesota (Local Chair)

**Donna Gilleskie**, UNC– Chapel Hill

**Paul Grootendorst**, University of Toronto

**Willard Manning**, University of Chicago

**John Mullahy**, University of Wisconsin-Madison

**Edward Norton**, University of Michigan



## Thursday, September 29, 2011

- 4:00 –6:00 PM : Pre-conference symposium “*Training, Teaching and Mentoring in Health Econometrics*”  
(Metrodome, Aragon Ballroom ABCD )  
Organizer: *John Mullahy*
- 6:00–8:00 PM : Social hour (Metrodome, Aragon Ballroom ABCD )
- 8:00 PM : Dinner (on your own)

## Friday, September 30, 2011

- 8:00 AM : Bus leaves Metrodome for Campus Club
- 8:25 – 8:30 AM : Welcome
- 8:30 – 9:30 AM : Paper # 1, *Will Manning* discusses *Kowalski et al.*
- 9:30 – 10:30 AM : Paper # 2, *Frank Windmeijer* discusses *Gilleskie et al.*
- 10:30 – 11:00 AM : Coffee Break
- 11:00 – 12:00 PM : Paper # 3, *Randall Ellis* discusses *Manning et al.*
- 12:00 – 1:00 PM : Paper # 4, *Maarten Lindeboom* discusses *Mroz et al.*
- 1:00 – 2:00 PM : LUNCH
- 2:00 – 3:00 PM : Paper # 5, *Partha Deb* discusses *Lahiri et al.*
- 3:00 – 4:00 PM : Paper # 6, *Stephen Parente* discusses *Ching et al.*
- 4:00 – 4:30 PM : Coffee Break
- 4:30 – 5:30 PM : Keynote Speech by *Prof. William Greene (Open Event)*
- 5:45 PM : Bus leaves Campus Club for Metrodome;
- 6:45 PM : Bus leaves Metrodome for Sea Change
- 7:00 – 10:00 PM : Social Event, Sea Change Bar and Restaurant
- 10:00 PM : Bus leaves Sea Change for Metrodome

## Saturday, October 1, 2011

- 8:00 AM : Bus leaves Metrodome for Campus Club
- 8:00 AM : Bus leaves Metrodome for Campus Club
- 8:30 - 9:30 AM : Paper # 7, *Donna Gilleskie* discusses *Danagoulian et al.*
- 9:30 – 10:30 AM : Paper # 8, *Joao Santos Silva* discusses *Li et al.*
- 10:30 – 11:00 AM : Coffee Break
- 11:00 – 12:00 PM : Paper # 9, *Brian Krauth* discusses *Fletcher et al.*
- 12:00 – 1:00 PM : LUNCH
- 1:00 – 2:00 PM : Paper # 10, *Colin Cameron* discusses *Kenkel et al.*
- 2:00 – 3:00 PM : Paper # 11, *Tom Mroz* discusses *Tennekoon et al.*
- 3:15 PM : Adjourn

(All papers will be available for download at the conference website:  
[www.healtheconometrics.org](http://www.healtheconometrics.org))



Friday, September 30, 2011

4:30 – 5:30 PM

**William Greene, PhD**

*New York University*

*Stern School of Business*

*New York NY, USA*

## LATENT CLASS MODELING

The latent class model has been a useful platform in a number of recent applications in health economics. In this presentation, I will survey the latent class approach as a particularly rich framework for behavioral modeling. The presentation will lay out the background theory and relate a number of empirical applications.

I begin by making (my own) distinction between ‘finite mixture modeling’ and ‘latent class modeling,’ which are often viewed (too narrowly) as synonymous. I define the finite mixture model as a description of a process in which the structure is a blend of different versions of the same model. The mixed linear regression model, in which  $f(y|\text{class}=j) = N[b_j'x, s_j^2]$  is a familiar example. This model can be viewed as one of parameter heterogeneity in the population. It is also a type of latent class model. However, the broad range of latent class models is much more flexible than this, and encompasses cases in which the model describes a latent mixture of entirely different structures. Two state count data models of (latent) zero inflation are familiar examples. I will examine a variety of settings in this more general framework.

The early literature contains a number of intriguing examples of what can be seen as latent class models, including the ‘switching regressions’ model, ‘split population’ models and Heckman and Singer’s discrete random effects model. I will survey this literature, propose a set of extensions, then develop a series of recent applications in health economics, discrete choice modeling and efficiency estimation in the stochastic frontier framework. The range of models considered begins with the simplest finite mixture of distributions and concludes with a proposed ‘mixture of mixed models,’ a latent class random parameters specification.



## Dr. William Greene

Toyota Motors Corp Professor of Economics

Departments of Economics and IOMS

Stern School of Business, NYU

Currently Professor of Economics and Toyota Motor Corp Professor, Department of Economics, Stern School of Business, New York University. Fields of interest are applied econometrics, panel data analysis, discrete choice modeling, production economics, health econometrics, transport economics and planning and economics of the entertainment industry. Teaching at New York University since 1982 includes Econometrics, Microeconomics, Macroeconomics and Economics of the Entertainment and Media Markets. Chairmain of the Economics department at Stern from 1995 to 2001, director of the Ph.D. program from 1988 to 1994. Previously Assistant Professor of Economics, Cornell University, 1976-1982. Other employment includes visiting lectureships at Indiana, Oxford (UK), University of York (UK), the Chicago Federal Reserve Bank, University of Lund (Sweden), ETH and University of Lugano (Switzerland), University of Crete, Sydney University (Australia), and the Institute of Fiscal Studies, University College, London. Consulting to Robert Wood Johnson Foundation, Resource Consultants, Inc., Ortho Biotech, National Economic Research Associates, The U.S. Navy, Lockheed Martin Corp, American Society of Composers, Authors and Publishers (ASCAP), Bass Hotels, Restaurant Revenue Management Systems, Econsult Corp., The United States Postal Service, Huron Consulting Firm, The Federal Reserve Bank (New York, Chicago, Philadelphia), The World Bank, Office of National Statistics (UK), Competition Commission (Portugal) and The World Health Organization. President of Econometric Software, Inc. since 1985. Author of software *LIMDEP* and *NLOGIT*, textbooks *Econometric Analysis (Ed. 1 to 6)*, (translated to Japanese, Chinese, French and Spanish) and books on discrete choice modeling, *Modeling Ordered Choices* and *Applied Choice Analysis*, and over 100 articles in applied econometrics, econometric methods, transportation, health economics, etc. in *Econometrica*, *Journal of Econometrics*, *Review of Economics and Statistics*, *Transport Research*, *Health Economics*, *Econometric Reviews*, *Empirical Economics*, *Economics Letters*, *Journal of Political Economy*, *Journal of Business and Economic Statistics*, *Journal of Economic Education* and *American Economic Review*. Editor in Chief, *Foundations and Trends in Econometrics*, Associate editor for *The Journal of Productivity Analysis*, *Journal of Choice Modeling* and the *Journal of Economic Education*.

## Friday, September 30, 2011

8:25 – 8:30 AM : Welcome

*SESSION # 1 Chair—Bryan Dowd, University of Minnesota*

8:30 – 9:30 AM : **Estimating the Tradeoff Between Risk Protection and Moral Hazard with a Non-Linear Budget Set Model of Health Insurance**

Discussant: Willard G. Manning, University of Chicago

Primary author: Amanda Kowalski, Yale University

9:30 – 10:30 AM : **Disentangling the contemporaneous and Life-cycle Effects of Body Mass on Earnings**

Discussant: Frank Windmeijer, Bristol University, UK

Primary Author: Donna Gilleskie, UNC Chapel Hill

10:30 – 11:00 AM : Coffee Break

*SESSION # 2 Chair— Anirban Basu, University of Washington*

11:00 - 12:00 PM : **Measuring Overfitting and Misspecification in Non-Linear Models**

Discussant: Randall Ellis, Boston University

Primary Author: Willard Manning, University of Chicago

12:00 – 1:00 PM : **A Multi-state Duration Model with Endogenous Treatment**

Discussant: Maarten Lindeboom, Free University of Amsterdam

Primary Author: Tom Mroz, Clemson University

1:00 – 2:00 PM : LUNCH

*SESSION # 3 Chair— John Mullahy, University of Wisconsin-Madison*

2:00 – 3:00 PM : **Beware of Being Unaware: Racial Disparities in Chronic Illness in the US**

Discussant: Partha Deb, Hunter College, CUNY

Primary Author: Kajal Lahiri, University at Albany, SUNY

3:00 – 4:00 PM : **The effects of publicity on demand: The case for anti-cholesterol drug**

Discussant: Stephen Parente, University of Minnesota

Primary Author: Andrew Ching, University of Toronto

4:00 – 4:30 PM : Coffee Break

*SESSION # 4 Chair—Edward Norton, University of Michigan*

4:30 – 5:30 PM : Keynote Speech “**Latent Class Modeling**” Prof. William Greene, New York University

Friday, September 30, 2011 (Contd.)

7:00 – 10:00 PM : Social Event

Saturday, October 1, 2011

*SESSION # 5 Chair—Edward Norton, University of Michigan*

8:30 - 9:30 AM : **Health Uncertainty and Medical Expenditure: A Model of Savings with Endogenous Transitions**

Discussant: Donna Gilleskie, University of North Carolina at Chapel Hill

Primary Author: Shooshan Danagoulian, Cornell University

9:30 -10:30 AM : **Family Social-economics Status, Childhood Life-Events and the Dynamics of Depression from Adolescence to Early Adulthood**

Discussant: Joao Santos Silva, University of Essex

Primary Author: Jinhu Li, University of Melbourne

10:30 – 11:00 AM : Coffee Break

*SESSION # 6 Chair—Will Manning, University of Chicago*

11:00 - 12:00 AM : **Estimating the Effects of Friendship Networks on the Health Behaviors of Adolescents**

Discussant: Brian Krauth, Simon Fraser University, Canada

Primary Author: Jason Fletcher, Yale University

12:00 – 1:00 PM : LUNCH

*SESSION # 7 Chair—Jennifer Kohn, Drew University*

1:00 - 2:00 PM : **Errors in Retrospective Data on Smoking: Comparing Maximum Likelihood and Ad-hoc Approaches**

Discussant: Colin Cameron, University of California - Davis

Primary Author: Donald Kenkel, Cornell University

2:00 –3:00 AM : **Treatment Evaluation with a Systematically Misclassified Outcome Variable**

Discussant: Tom Mroz, Clemson University

Primary Author: Vidhura Tennekoon, Washington State University

3:15 PM ADJOURN



*Friday September 30, 2011, 7-10 PM*

## *Sea Change Restaurant and Bar*

*806 South 2nd Street at the Guthrie  
Minneapolis, MN 55415*

612.225.6499

<http://seachangempls.com/>

\*A bus service will be provided from Metrodome to Sea Change at 6:45 pm and from Sea Change to Metrodome at 10.00 pm.



**Recommended hotel.** Participants are expected to make their own reservations)

### **Holiday Inn Minneapolis Metrodome**

We have contracted with the Holiday Inn Minneapolis Metrodome, 1500 Washington Ave. So., Minneapolis for room for the nights of Thursday, September 29 and Friday, September 31. Reservations are to be made by individual attendees directly by calling (800) 448-3663 or (612) 333-4646 and asking for guest reservations and the Health Policy Conference rate.

Reservations must be made by Thursday, September 8, 2011. The group rate per night is \$110.00 plus tax.

<http://www.metrodome.com/>



### **Conference Location**

The conference will be held at the Campus Club located in Coffman Memorial Union, 300 Washington Ave. SE. Shuttle service from the hotel will be provided.

## Directions to the Metrodome Hilton from MSP

For maps, directions, and information on how to get to the hotel from the airport, see

<http://www.metrodome.com/map-directions>

The closest major airport is Minneapolis / St. Paul International Airport (MSP), which is about 8.5 miles away. The best way to get to the hotel from the airport is by taxi. There are multiple taxi, limo and shuttle services to take you to and from the airport.



### Super Shuttle:

Website for Super Shuttle (reservation from airport to hotel)

<http://supershuttle.shuttlefare.com/?gclid=COjR0dHR0aoCFQfsKgodHldJPw>

### Taxis:

ITN Taxi and Care Shervice

<http://www.itnhome.com/?gclid=Cleixarl0aoCFYjsKgodZQoh0Q>

### Airport Taxi

<http://airporttaximn.reachlocal.net/>