The 4th Annual Health Econometrics Workshop

September 27 – September 29, 2012

Roosevelt House Public Policy Institute
Hunter College, New York, NY

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.

The workshop has limited capacity but is open to all!

Welcome to the 2012 (4th) Annual Health Econometrics Workshop. The workshop will be held at the Roosevelt House Public Policy Institute, Hunter College, New York, NY from Sep 27 – 29, 2012. After a great response to and success in the last three workshops, we received thirty-four highly qualified papers this year. Due to time constraints, we were able to include only 10 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 Andrew Gelman of Columbia University for agreeing to deliver the key-note speech of the conference.

We gratefully acknowledge the support of our sponsors, Agency for Healthcare Research and Quality (AHRQ), Pfizer Inc, Journal of Applied Econometrics, Hunter College, NY and the University of Washington, 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!

<u>Organizing Committee</u>

Anirban Basu, University of Washington, Seattle

Partha Deb, Hunter College , CUNY (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 27, 2012

6:00—8:00 PM   : **Social hour at Roosevelt House** - a short tour of the FDR Library on the second floor, where Franklin met with future cabinet members before his inauguration and where some of his fireside chats originated when he was President.

    8:00 PM   : Dinner (on your own)

Friday, September 28, 2012

8:00 AM   : Walk/shuttle from Pod39 to Roosevelt House
                                (http://www.roosevelthouse.hunter.cuny.edu/)

8:25 – 8:30 AM   : Welcome
8:30 – 9:30 AM   : Paper # 1, *William Greene* discusses *Belotti et al.*
9:30 – 10:30 AM   : Paper # 2, *Edward Norton* discusses *Ching et al.*
10:30 – 11:00 AM : Coffee Break
11:00 – 12:00 PM : Paper # 3, *Michael Ransom* discusses *Lomas et al.*
12:00 – 1:00 PM   : Paper # 4, *David Jaeger* discusses *Basu*
1:00 – 2:00 PM   : LUNCH
2:00 – 3:00 PM   : Paper # 5, *Amanda Kowalski* discusses *Pieroni et al.*
3:00 – 4:00 PM   : Paper # 6, *Kajal Lihiri* discusses *LeCates et al.*
4:00 – 4:30 PM   : Coffee Break
4:30 – 5:30 PM   : Paper # 7, Andrew Jones discusses *Greene et al.*
5:45 PM   : Walk/Shuttle back to Pod39;
7:45 PM   : Walk/Shuttle to Restaurant (Page 9)
8:00 – 11:00 PM   : Social Event at Tulsi
11:00 PM   : Walk/Shuttle back to Pod39

Saturday, September 29, 2012

8:30 AM   : Walk/Shuttle to Roosevelt House
9:00 – 10:30 AM   : Keynote Speech by *Prof. Andrew Gelman (Open Event)*
10:30 – 11:00 AM : Coffee Break
11:00 – 12:00 PM : Paper # 8, *Goutam Gourisankaran* discusses *Hu et al.*
12:00 – 1:00 PM   : LUNCH
1:00 – 2:00 PM   : Paper # 9, *Margaret Kyle* discusses *McCullough et al.*
2:00 – 3:00 PM   : Paper # 10, Maarten Lindeboom discusses *Papageorge et al.*
3:15 PM   : Adjourn

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

Saturday, September 29, 2012
9:00 – 10:30 PM
Andrew Gelman, PhD
Columbia University
New York NY, USA

CAUSALITY AND STATISTICAL LEARNING

Causal inference is central to econometrics and to social science in general. There are unresolved debates about the meaning of causality and the methods that should be used to measure it. As a statistician, I am trained to say that randomized experiments are a gold standard, yet I have spent almost all my applied career analyzing observational data. In this talk we shall consider various approaches to causal reasoning from the perspective of an applied statistician who recognizes the importance of causal identification yet must learn from available information.

Consider two broad classes of inferential questions:

1. Forward causal inference. What might happen if we do X? What are the effects of smoking on health, the effects of schooling on knowledge, the effect of campaigns on election outcomes, and so forth?

2. Reverse causal inference. What causes Y? Why do more attractive people earn more money? Why do many poor people vote for Republicans and rich people vote for Democrats? Why did the economy collapse?

In forward reasoning, the potential treatments under study are chosen ahead of time, whereas, in reverse reasoning, the research goal is to find and assess the importance of the causes. The distinction between forward and reverse reasoning (also called "the effects of causes" and the "causes of effects") was made by Mill (1843). Forward causation is a clearly defined problem, and there is a consensus that it can be modeled using the counterfactual or potential-outcome notation: the causal effect of a treatment T on an outcome Y for an individual person (say), is a comparison between the value of Y that would have been observed had the person followed the treatment versus the value that would have been observed under the control.

Reverse causal inference is another story. As has long been realized, the effects of action X flow naturally forward in time, while the causes of outcome Y cannot be so clearly traced backward. Did the North Vietnamese win the American War because of the Tet Offensive, or because of American public opinion, or because of the military skills of General Giap, or because of the political skills of Ho Chi Minh, or because of the conflicted motivations of Henry Kissinger, or because of Vietnam's rough terrain, or . . . ? To ask such questions is to reveal the impossibility of answering them. On the other hand, questions such as *why* do whites do better than blacks in school? are, while difficult, not inherently unanswerable or meaningless.

Prof. Andrew Gelman

Professor of Statistics

Professor of Political Science

Columbia University

Andrew Gelman is a professor of statistics and political science and director of the Applied Statistics Center at Columbia University. He has received the Outstanding Statistical Application award from the American Statistical Association, the award for best article published in the American Political Science Review, and the Council of Presidents of Statistical Societies award for outstanding contributions by a person under the age of 40. His books include Bayesian Data Analysis (with John Carlin, Hal Stern, and Don Rubin), Teaching Statistics: A Bag of Tricks (with Deb Nolan), Data Analysis Using Regression and Multilevel/Hierarchical Models (with Jennifer Hill), and, most recently, Red State, Blue State, Rich State, Poor State: Why Americans Vote the Way They Do (with David Park, Boris Shor, Joe Bafumi, and Jeronimo Cortina).

Andrew has done research on a wide range of topics, including: why it is rational to vote; why campaign polls are so variable when elections are so predictable; why redistricting is good for democracy; reversals of death sentences; police stops in New York City, the statistical challenges of estimating small effects; the probability that your vote will be decisive; seats and votes in Congress; social network structure; arsenic in Bangladesh; radon in your basement; toxicology; medical imaging; and methods in surveys, experimental design, statistical inference, computation, and graphics.

Friday, September 28, 2012

8:25 – 8:30 AM   : Welcome

SESSION # 1 Chair—Anirban Basu, University of Washington, Seattle

8:30 – 9:30 AM   : TESTING FOR TIME-INVARIANT UNOBSERVED HETEROGENEITY IN NONLINEAR PANEL DATA MODELS

> Discussant: William Greene, New York University

> Primary author: Federico Belotti , University of Rome, Italy

9:30 – 10:30 AM   : QUANTIFYING THE IMPACTS OF LIMITED SUPPLY: CASE OF NURSING HOMES

> Discussant: Edward Norton, University of Michigan

> Primary Author: Andrew Ching, University of Toronto, Canada

10:30 – 11:00 AM : Coffee Break

SESSION # 2 Chair— Partha Deb, Hunter College, CUNY

11:00 - 12:00 PM   : APPLYING BETA-TYPE SIZE DISTRIBUTIONS TO HEALTHCARE COST REGRESSION

> Discussant: Michael Ransom, Brigham Young University

> Primary Author: James Lomas, University of York, UK

12:00 – 1:00 PM   : ESTIMATING PERSON CENTERED TREATMENT EFFECTS USING IV

> Discussant: David Jaeger, City University of New York

> Primary Author: Anirban Basu, University of Washington

1:00 – 2:00 PM   : LUNCH

SESSION # 3 Chair— Jennifer Kohn, Drew University

2:00 – 3:00 PM   : SMOKING AND BODY WEIGHT

> Discussant: Amanda Kowalski, Yale University

> Primary Author: Luca Pieroni, University of Perugia, Italy

3:00 – 4:00 PM   : PERCEPTION SPILLOVERS BETWEEN BUNDLED GOODS

> Discussant: Kajal Lahiri, University at Albany, State University of New York

> Primary Author: Joseph LeCates, Cornell University

4:00 – 4:30 PM   : Coffee Break

SESSION # 4 Chair—Edward Norton, University of Michigan

4:30 – 5:30 PM   : INFLATED RESPONSES IN MEASURES OF SELF-ASSESSED HEALTH

> Discussant: Andrew Jones, University of York, UK

> Primary Author: William Greene, New York University

Friday, September 28, 2012 (Contd.)

7:00 – 10:00 PM : Social Event at *Tulsi (See Page 9)*

Saturday, September 29, 2012

SESSION # 5 Chair—Partha Deb, Hunter College, CUNY

9:00 - 10:30 AM   : **KEY-NOTE SPEECH**

    <u>Speaker</u>: **ANDREW GELMAN, COLUMBIA UNIVERSITY**

    <u>Topic:</u>   CASUALITY AND STATISTICAL LEARNING

10:30 –   11:00 AM : Coffee Break

SESSION # 6 Chair—Paul Grootendorst, University of Toronto

11:00 - 12:00 AM   : **ESTIMATING INCENTIVE AND SELECTION EFFECTS IN MEDIGAP INSURANCE MARKET**

    <u>Discussant</u>: Gautam Gowrisankaran, University of Arizona

    <u>Primary Author</u>: Xuequn Hu, University of South Florida

12:00 –   1:00 PM : LUNCH

SESSION # 7 Chair—Donna Gilleskie, UNC-Chapel Hill

1:00 - 2:00 PM   : **DYNAMIC MODEL OF PHARMACEUTICAL DEMAND AND WELFARE CONSEQUENCES**

    <u>Discussant</u>: Margaret Kyle, Toulouse School of Economics, France

    <u>Primary Author</u>: Jeffrey McCullough, University of Minnesota

2:00 –3:00 AM   : **HEALTH CHOICES AND MEDICAL BREAKTHROUGHS**

    <u>Discussant</u>: Maarten Lindeboom, VU University, The Netherlands.

    <u>Primary Author</u>: Nicholas Papageorge, Johns Hopkins University

3:15 PM ADJOURN

Friday September 28, 2012, 8-11 PM

Tulsi

Tulsi features distinctive regional Indian cuisine created by Chef Hemant Mathur, critically acclaimed for his clean, distinct flavors and a master of tandoor cooking.

Tulsi has a prestigious Michelin star. http://tulsinyc.com/

211 East 46th Street

(between 2nd & 3rd Aves)

New York, NY 10017

Tel: 212-888-0820 Fax: 212-888-0827

*A shuttle service will be provided from POD 39 to Restaurant at 7:45 pm and from Tulsi to POD 39 at 11.00 pm.

Lodging All registered participants will be provided up to two nights (Sep 27 & 28) of accommodations at the workshop Hotel:

POD 39 (http://www.thepodhotel.com/)

This is the new POD hotel located at 145 E39 St. NYC, NY 10016. between 3rd and Lexington avenues. It's 3 blocks from Grand Central Terminal and the 4/5/6 subway lines. Taxis, obviously, are everywhere.

Phone: +1.212.865.5700
Fax: +1.212.865.5701
US Toll-free Reservations: +1.855.POD.5700
Information Email: info@thepodhotel39.com
Reservations Email: reservations@thepodhotel39.com

Conference Location

The conference will take place at the Roosevelt House at Hunter College,

47-49 East 65th Street between Park and Madison Avenues (closer to Park)

http://www.roosevelthouse.hunter.cuny.edu/

The New York City area has 3 airports. For domestic travelers, La Guardia is the most convenient. JFK is the easiest for international travelers but Newark international airport in NJ works as well.

This is the new POD hotel located at 145 E39 St. NYC, NY 10016. between 3rd and Lexington avenues.

It's 3 blocks from Grand Central Terminal and the 4/5/6 subway lines.

Taxis, obviously, are everywhere.