# The 8<sup>th</sup> Annual Health Econometrics Workshop

September 29- October 1, 2016

# **University of Colorado Denver Anschutz Medical Campus**



## 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. If interested, please register at www.healtheconometrics.org

Welcome to the 2016 (8<sup>th</sup>) Annual Health Econometrics Workshop. The workshop will be held at the University of Colorado Denver, Anschutz Medical Campus, Denver, USA from Sep 29—Oct 1, 2016. We received forty seven highly qualified papers this year. Due to time constraints, we were able to include only 9 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 A. Colin Cameron of University of California Davis 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, Department of Health Systems, Management and Policy, Colorado School of Public Health, University of Colorado Denver and the University of Washington, Departments of Health Services and Pharmacy, without whom this conference would not be possible. Special thanks to Stephanie O. Guerrero for handling most of the logistics around the organization.

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

#### **Organizing Committee**

**Anirban Basu, University of Washington** Partha Deb, Hunter College, CUNY Donna Gilleskie, UNC at Chapel Hill Paul Grootendorst, University of Toronto **Audrey Laporte, University of Toronto** Richard Lindrooth (Local Chair), University of Colorado John Mullahy, University of Wisconsin-Madison **Edward Norton, University of Michigan** Nicholas Papageorge, Johns Hopkins University 2016 Director of Outreach Monica Garcia-Perez , St. Cloud State University





UNIVERSITY OF COLORADO COLORADO STATE UNIVERSITY UNIVERSITY OF NORTHERN COLORADO







#### Thursday, September 29, 2016

6:30—9:00 PM : Pre-conference Welcome Session at Ursula Brewery Ursula Brewery is within walking distance from hotel (0.9 miles)

Complimentary Hotel Shuttle pick-up from hotel to venue: 5:30pm and 6:00pm

Complimentary Hotel Shuttle pick-up from venue to hotel: 8:00pm and 8:30pm

#### Friday, September 30, 2016

Conference location is within walking distance from hotel (0.6 miles)

Complimentary Hotel Shuttle pick-up from hotel to conference location: 7:30am and 8:00am Complimentary Hotel Shuttle pick-up from conference location to hotel: 5:00pm and 5:30pm

7:45 - 8:30 AM : Breakfast and Welcome

8:30 - 9:30 AM : Paper # 1, Bart Hamilton discusses Forsstrom

9:30 - 10:30 AM : Paper # 2, Kate Ho discusses Ketcham et al.

10:30 - 11:00 AM : Coffee Break

11:00 - 12:00 PM : Paper # 3, Bill Greene discusses Tchernis et al.

12:00 - 1:00 PM : LUNCH

1:00 - 2:00 PM : Paper # 4, Bryan Dowd discusses Sfekas

2:00 - 3:00 PM : Paper # 5, David Grabowski discusses Barrenho

3:00 - 3:30 PM : Coffee Break

3:30 - 5:00 PM : Keynote Speech by Prof. A. Colin Cameron

6:30 - 9:30 PM : Evening Social Event & Dinner at Colt & Gray

Arrow Stage Line Charter bus pick-up from hotel: 5:45pm

Arrow Stage Line Charter bus pick-up from venue to hotel: 9:30pm

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### Saturday, October 1, 2016

Complimentary Hotel Shuttle pick-up from hotel to conference location: 7:30am and 8:00am Complimentary Hotel Shuttle pick-up from conference location to hotel: 1:00pm and 2:00pm

7:30 - 8:30 AM : Breakfast

8:30 - 9:30 AM : Paper # 6, Debashis Ghosh discusses Muller et al.

9:30 - 10:30 AM : Paper # 7, Edward Norton discusses Kowalski

10:30 - 11:00 AM : Coffee Break

11:00 - 12:00 PM : Paper # 8, John Rust discusses Papageorge et al.

12:00 - 1:00 PM : Paper # 9, Andrew Friedson discusses Yang

1:00 PM : BOX LUNCH

2:00 PM : Adjourn

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



Friday, September 30, 2016 3:30 – 5:00 PM **A. Colin Cameron, PhD** University of California-Davis California, USA

## **Robust Inference with Clustered Errors**

This talk, based on joint work with Doug Miller, considers statistical inference for regression when data are grouped into clusters, with regression model errors independent across clusters but correlated within clusters. Examples include data on individuals with clustering on village or region or other category such as industry, and state-year differences-in-differences studies with clustering on state. In such settings default standard errors can greatly overstate estimator precision. Instead statistical inference OLS should be based on cluster-robust standard errors. The talk outlines the basic method as well as many complications that can arise in practice: cluster-specific fixed effects, few clusters, unbalanced clusters, multi-way clustering, and estimators other than OLS.

## Prof. A. Colin Cameron

Professor, Department of Economics; University of California-Davis

Colin Cameron was educated at the Australian National University (undergraduate) and Stanford University (graduate). He is currently a Professor of Economics in the Department of Economics at the University of California – Davis, where he teaches econometrics courses at various levels as well as an undergraduate course in health economics, and a visiting Professor at University of Sydney. He was previously an Assistant Professor at The Ohio State University (1987-89). He has held visiting positions at University of Sydney, Australian National University, University of New South Wales and Indiana University -Bloomington.

Colin Cameron's main research is in microeconometrics for cross-section data and has appeared in many of the leading all-round economics journals and econometrics field journals. His research on count data modeling includes a 1986 Journal of Applied Econometrics article "Econometrics Models Based on Count Data: Comparisons and Applications of Some Estimators and Tests" (joint with Pravin Trivedi). His research on robust statistical inference in regression models with errors that are clustered includes the 2008 Review of Economics and Statistics article "Bootstrap-based Improvements for Inference with Clustered Errors", the 2011 Journal of Business and Statistics article "Robust Inference with Multi-Way Clustering" (both joint work with Jonah Gelbach and Doug Miller) and the 2015 Journal of Human Resources article "A Practiotioner's Guide to Cluster-Robust Inference" (joint with Doug Miller).

Colin Cameron is also the coauthor with Pravin Trivedi of three leading books in microeconometrics. Regression Analysis of Count Data is one of only two Econometric Society Monographs to have a second edition. *Microeconometrics:* Methods and Applications is one of the two standard advanced Ph.D. texts in microeconometrics. Microeconometrics using Stata is a text for implementing advanced microeconometrics models using Stata, the leading econometrics package for economics researchers. His books and research articles have received over 24,000 Google Scholar citations. He has been a keynote speaker at international conferences and has given many short courses on advanced microeconometrics at universities and central banks around the world.

Cv: http://cameron.econ.ucdavis.edu/research/vita.pdf

## Friday, September 30, 2016

8:25 - 8:30 AM : Welcome

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

 $8:30-9:30~\mathrm{AM}$  : Abortion costs and single parenthood: A life-cycle model of fertility and partnership behavior

**Discussant**: Barton Hamilton, Washington University at St. Louis

**Primary Author:** Matthew Forsstrom, UNC-Chapel Hill

 $9:30-10:30\,\mathrm{AM}$  : Estimating the heterogeneous welfare effects of choice architecture: an application to the medicare prescription drug insurance market

**Discussant**: Kate Ho, Columbia University

**Primary Author:** Jonathan Ketcham, Arizona State University

10:30 - 11:00 AM : Coffee Break

### SESSION # 2 Chair— Monica Garcia-Perez, St. Cloud State University

 $11:00-12:00\,\mathrm{PM}$  : On the estimation of treatment effects with endogenous misreporting

**Discussant**: William Greene, New York University

Primary Author: Rusty Tchernis, Georgia State University

12:00 - 1:00 PM : LUNCH

#### SESSION # 3 Chair—Nicholas Papageorge, Johns Hopkins University

 $1:00-2:00\ PM$  : Estimating hospital choices when the true choice set is unknown

<u>Discussant</u>: Bryan Dowd, University of Minnesota <u>Primary author</u>: Andrew Sfekas, Bryn Mawr College

 $2:00-3:00\,PM$  : The determinants of failure in drug development: A duration analysis

**Discussant**: David Grabowski, Harvard University

Primary Author: Eliana Barrenho, Imperial College London, UK

3:00 - 3:30 PM : Coffee Break

Friday, September 30, 2016 (Contd.)

SESSION # 5 Chair—Edward Norton, University of Michigan

3:30 - 5:00 PM : **KEY-NOTE SPEECH** 

Speaker: A. COLIN CAMERON, UNIVERSITY OF CALIFORNIA-DAVIS

Topic: ROBUST INFERENCE USING CLUSTERED ERRORS

6:30 - 10:00 PM: Social Event & Dinner at COLT & GRAY

Saturday, October 1, 2016

SESSION # 6 Chair— Don Kenkel, Cornell University

8:30 - 9:30 AM : DOES MY HIGH BLOOD PRESSURE IMPROVE YOUR SURVIVAL?

**OVERALL AND SUBGROUP LEARNING CURVES IN HEALTH** 

Discussant: Debashis Ghosh, University of Colorado, Denver

Primary Author: Tobias Muller, University of Lucerne, Switzerland

 $9:30-10:30\,\mathrm{AM}$  : Doing more when you're running late: applying marginal

TREATMENT EFFECT METHODS TO EXPERIMENTS

**Discussant**: Edward C. Norton, University of Michigan, Ann Arbor

Primary Author: Amanda Kowalski, Yale University

10:30 - 11:00 AM : Coffee Break

SESSION # 7 Chair—Audrey Laporte, University of Toronto

 $11:00-12:00~\mathrm{PM}$  : Innovation and diffusion of medical treatment

**Discussant**: John Rust, Georgetown University

**Primary Author:** Nicholas Papageorge, Johns Hopkins University

 $12:00-1:00\,\mathrm{PM}$  : Does public health insurance improve healthcare utilization and health outcome in china? Semiparametric estimation of a panel data model with endogenous treatment and non-additive individual heterogeneity

**Discussant**: Andrew Friedson, University of Colorado, Denver

**Primary Author:** Shuyang Yang, Rutgers University

1:00 PM : BOX LUNCH 2:00 PM : ADJOURN **Lodging** All registered participants will be provided up to two nights (Sep 29 & 30) of accommodations at:

## **HYATT-REGENCY AURORA-DENVER** 13200 East 14th Place Aurora, Colorado, USA 80011

http://aurora.regency.hyatt.com/en/hotel/home.html



NEAREST AIRPORT FROM HOTEL: Denver International Airport (<a href="http://www.flydenver.com/">http://www.flydenver.com/</a>)

GROUND TRANSPORTATION OPTIONS AT PEARSON SIRPORT: <a href="http://www.flydenver.com/parking\_transit">http://www.flydenver.com/parking\_transit</a>

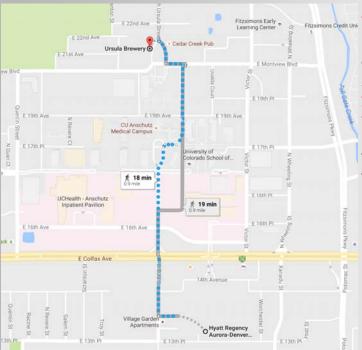
# Conference Venue (Complimentary Hotel Shuttle Available) Education 1, Room P26-1400

University of Colorado Anschutz Medical Campus, Aurora, CO



## Pre-conference Welcome Session (September 29<sup>th</sup>, 2016)

Ursula Brewery, 2101 North Ursula Street, Aurora, CO 80045



http://ursulabrewery.com/ and Bistro Colorado Food Trucks (http:// www.bistrocolorado.com/ food-truck.html)

(Complimentary Hotel Shuttle Service Available)

## Conference Dinner (September 30<sup>th</sup>, 2016)

Colt & Gray, 1533 Platte Street, Denver Co 80202, USA <a href="http://www.coltandgray.com/">http://www.coltandgray.com/</a>

(Bus Service will be provided)

