

## GRAY CALHOUN

Curriculum Vitae, September 7, 2017

### CONTACT INFORMATION

Amazon Central Economics	Work:	<a href="mailto:gcalhou@amazon.com">gcalhou@amazon.com</a>
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### EDUCATION

2009 PhD Economics. University of California, San Diego  
Dissertation title: *Limit theory for overfit models*  
2006 MS Statistics. University of California, San Diego  
2001 BA Mathematics. Tufts University

### RECENT WORK HISTORY

2017–present Senior Economist at Amazon, Central Economics team  
2009–2017 Assistant Professor of Economics, Iowa State University

### PUBLICATIONS

#### Refereed articles

Integrated Assessment Models of the Food, Energy, and Water (FEW) Nexus: A Review and Research Needs, August 2016 (with Catherine L. Kling, Raymond W. Arritt, and David A. Keiser). Accepted by *Annual Review of Resource Economics*.

Bootstrap Confidence Intervals for Sharp Regression Discontinuity Designs (with Otávio Bartalotti and Yang He). Accepted by *Advances in Econometrics* for volume 38, October 2016.

Hypothesis testing for linear regression when  $k/n$  is large. *Journal of Econometrics*, 165(2):163–174, 2011

#### Manuscripts in submission

Improved stepdown methods for asymptotic control of generalized error rates, 2015. Revise and resubmit at *Journal of Econometrics*

An asymptotically normal out-of-sample test based on mixed estimation windows, 2016. Revise and resubmit at *Econometrica*

Block bootstrap consistency under weak assumptions, 2016. Revise and resubmit at *Econometric Theory*

Out-of-sample comparisons of overfit models, 2015. Iowa State University Economics Department Working Paper 11002. Revise and resubmit at *Quantitative Economics*

### **Manuscripts in preparation**

A simple block bootstrap for asymptotically normal out-of-sample test statistics

A method for smoothing Impulse Response Functions for discrete-time linear models

### **Other working papers**

Research Needs and Challenges in the FEW System: Coupling Economic Models with Agronomic, Hydrologic, and Bioenergy Models for Sustainable Food, Energy, and Water Systems (with Catherine L. Kling, Raymond W. Arritt, David A. Keiser, John M. Antle, Jeffery G. Arnold, Miguel Carriquiry, Indrajeet Chaubey, Peter Christensen, Baskar Ganapathysubramanian, Philip Gassman, William Gutowski, Thomas W. Hertel, Gerrit Hoogenboom, Elena Irwin, Madhu Khanna, Pierre Mérel, Daniel J. Phaneuf, Andrew Plantinga, Stephen Polasky, Paul Preckel, Sergey Rabotyagov, Ivan Rudik, Silvia Secchi, Aaron Smith, Andrew Vanloocke, Calvin Wolter, Jinhua Zhao, and Wendong Zhang), 2016. CARD Working Paper #563.

A graphical analysis of causality in the Reinhart-Rogoff dataset, 2015. Iowa State University Economics Department Working Paper #15014

### **HONORS AND AWARDS**

2006 Walter P. Heller Award for Outstanding Third-Year Paper, UCSD Economics Department

### **GRANTS AND FELLOWSHIPS**

2015 NSF 1541790, “FEW: Coupling Economic Models with Agronomic, Hydrologic, and Bioenergy Models for Sustainable Food, Energy, and Water Systems,” Co-PI with Catherine Kling, Raymond Arritt, and David Keiser (\$45,922)

2012 Iowa State University Strategic Initiative, “Graphical Processing Units (GPU) for Parallel Computing,” with Helle Bunzel, Jarad Niemi, and Mervyn Marasinghe (\$87,727.39)

### **EXTERNAL PRESENTATIONS**

#### **Invited seminars**

2015 University of Montreal Economics Department

### **Invited conference presentations**

2015 CIREQ Montreal Econometrics Conference

### **Other presentations**

2017 University of Western Ontario Economics Department.

2016 Advances in Econometrics Conference, Regression Discontinuity Designs

2015 Annual Meetings of the Midwest Econometrics Group; NSF workshop, “Coupling Economic Models with Agronomic, Hydrologic, and Bioenergy Models for Sustainable Food, Energy, and Water Systems” (panelist)

2014 NBER Summer Institute, Forecasting & Empirical Methods in Macro & Finance; Joint Statistical Meetings

2013 NBER-NSF Time Series Conference (poster session); Annual Meetings of the Midwest Econometrics Group

2012 First Conference of the International Society for Non-Parametric Statistics

2011 NBER-NSF Time Series Conference; Annual Meetings of the Midwest Econometrics Group

2010 Annual Meetings of the Midwest Econometrics Group; Joint Statistical Meetings; International Symposium on Forecasting; Midwest Economics Association Annual Meetings

2009 Federal Deposit Insurance Corporation; Iowa State University Economics Department; Federal Reserve Bank of Kansas City; Wayne State University Economics Department

## **TEACHING EXPERIENCE**

### **Courses taught**

2011–2017 PhD Macroeconometrics (Iowa State)

2010–2017 Principles of Macroeconomics (Iowa State)

2009–2016 PhD Econometrics 1 (Iowa State)

2009. Undergraduate Econometrics 3 (UCSD)

### **Graduate student advisor, students listed with year of graduation**

2015 Matt Simpson, PhD Economics and Statistics. Co-advisor with Jarad Niemi. Placement: Post-Doctoral Researcher in Statistics at University of Missouri

2015 Anwen Yin, PhD Economics. Co-advisor with Helle Bunzel. Placement: Assistant Professor of Economics at Texas A&M International University

### **Graduate student committee member, students listed with year of graduation**

Current students: Kevin Duncan, PhD Economics; Yang He, PhD Economics; Zachary Martin, PhD Economics; Samantha Tyner, PhD Statistics

2017 Zabid Iqbal, PhD Economics; Ziran Li, PhD Economics; Carson Sievert, PhD Statistics

- 2016 Soumnyadip Roy, PhD Economics
- 2015 Matthew Clancy, PhD Economics; Sam Helmich, MS Statistics; Deung-Yong Heo, PhD Economics; Xiying Liu, PhD Economics; Jessica Short, MS Statistics
- 2013 Yihui Xie, PhD Statistics; Nathan Zimmerman, MS Statistics
- 2012 Jeremiah Richey, PhD Economics
- 2010 Ozgu Serttas, PhD Economics

## **PROFESSIONAL SERVICE**

### **Conference organization**

- 2015 NSF workshop, “Coupling Economic Models with Agronomic, Hydrologic, and Bioenergy Models for Sustainable Food, Energy, and Water Systems.” Ames, Iowa, 10/12–10/13.  
Organizing committee

### **Journal and handbook referee**

*Advances in Econometrics; American Journal of Agricultural Economics; Bernoulli; Communications in Statistics — Theory and Methods; Computational Statistics and Data Analysis; Econometrica; Economics Bulletin; Handbook of Economic Forecasting, volume 2; International Journal of Forecasting; Journal of Business & Economic Statistics; Journal of Econometric Methods; Journal of Money, Credit & Banking; Manchester School*

### **College and university committees at Iowa State**

- 2016–2017 LAS Faculty Representative Assembly Vice Chair
- 2015–2017 LAS Computer Advisory Committee
- 2014–2017 LAS Faculty Representative Assembly Executive Committee
- 2013–2017 LAS Faculty Representative Assembly

### **Departmental committees at Iowa State**

- 2015–2017 Seminar Committee
- 2014–2015 Agricultural Economist Hiring Committee
- 2013–2014 Environmental and Resource Economist Hiring Committee
- 2012–2013 Computer Support Staff Hiring Committee
- 2009–2013 Graduate Student Admissions Committee
- 2009–2014 Computer Committee

### **Professional membership**

American Economic Association, American Statistical Association, Econometric Society, Institute of Mathematical Statistics