

CONTACT INFORMATION      Department of Applied Mathematics      *Phone:* (303) 492-0685  
University of Colorado, Boulder      *Fax:* (303) 492-4066  
Engineering Center, Room ECOT 337      *E-mail:* corcoran@colorado.edu  
Boulder, CO 80309-0526 USA      *WWW:* amath.colorado.edu

CITIZENSHIP      USA

RESEARCH INTERESTS      Markov chain Monte Carlo methods, perfect sampling, applied probability, and stochastic processes with a focus on applications in statistical physics, high energy particle physics, rarefied gas dynamics, supervised learning of Bayesian networks, multiple target tracking, and data fusion..

EDUCATION

Ph.D., 1998, **Colorado State University**, Department of Statistics

Advisor: Richard L. Tweedie

M.S., 1993, **Purdue University**, Department of Mathematics

B.S., 1991, **Colorado State University**, Department of Mathematics

POSITIONS HELD

- August 2005 - present  
Associate Professor, Department of Applied Mathematics,  
University of Colorado, Boulder.
- August 2000 - May 2005  
Assistant Professor, Department of Applied Mathematics,  
University of Colorado, Boulder.
- August 1998–May 2000  
Assistant Professor, Department of Statistics,  
University of Georgia.
- January 1998–August 1998  
Graduate Research Assistant, Department of Statistics,  
Colorado State University.
- August 1995–December 1997  
Graduate Teaching Assistant, Department of Statistics,  
Colorado State University.
- June 1997–September 1997  
Intern, Geophysical Statistics Project,  
National Center for Atmospheric Research.
- January 1996–May 1996  
Graduate Research Assistant, Department of Statistics,  
Colorado State University.  
*Research funded by:* National Atmospheric Deposition Program.
- August 1994–December 1996  
Instructor, Department of Mathematics,  
Front Range Community College, Fort Collins, CO.

- August 1993–May 1994  
Graduate Teaching Assistant, Department of Mathematics,  
Colorado State University.
- August 1991–May 1993  
Graduate Teaching Assistant, Department of Mathematics,  
Purdue University.

#### FUNDING

##### National Institute of Standards and Technology

- Principal Investigator, NIST-SURF Program, “Summer Undergraduate Research Fellowship”, (\$8,265), 05/2009-09/2010

##### National Science Foundation

- Co-Principal Investigator, NSF-ITR (NSF CCF-008178), “Stochastic Summation of High-Order Feynman Graph Expansions”, (\$487,000) (with H.B. Shüttler, D.K. Lowenthal, and R.W. Robinson) 2000-2003, no-cost extension through 2005.

##### University Corporation for Atmospheric Research

- Principal Investigator, UCAR, “Behavior of Extreme Values on Different Spatial Scales”, (\$9,862), 08/2005.
- Principal Investigator, UCAR, “Behavior of Extreme Values on Different Spatial Scales”, (\$3,000), 08/2004.
- Principal Investigator, UCAR, “Properties of Perfect and MCMC Sampling for a Geophysical Space/Time Model”, (\$6,461), 2003-2004.

##### University of Colorado

- Principal Investigator, LEAP Associate Professor Growth Grant, “Non-parametric Monte Carlo Estimation of Rare Event Probabilities Using Kernel Density Estimation”, (\$6,300), 7/2008.

##### University of Georgia

- Teaching Research Unit (internal university grant) for the 1999-2000 academic year; University of Georgia. (\$3000).

#### PAPERS, SUBMITTED

J.N. Corcoran and C. Miller. Perfect Gibbs Sampling of Order Constrained Non-  
IID Ordered Random Variates with Application to Bayesian Principal Components  
Analysis. Submitted to Computational Statistics and Data Analysis, December 2020.  
(<https://arxiv.org/abs/2012.15452>)

C. Miller, M.D. Schneider, J.N. Corcoran, and J. Berstein. Bayesian Fusion of Data  
Partitioned Particle Estimates. Submitted to the SIAM/ASA Journal on Uncertainty  
Quantification, October 2020. (<https://arxiv.org/abs/2010.13921>)

J.N. Corcoran. Bridging the Gap Between Aggregated and Truly Continuous Data  
Discretization in Bayesian Networks with Birth and Death Processes. Submitted to  
Journal of Machine Learning Research, November 2019.

#### PAPERS, IN PROGRESS

J.N. Corcoran and J. Muller. Working Title: Statistical Level Sets for Image Segmen-  
tation.

J.N. Corcoran and C. Miller. Working Title: Perfect Sampling for Bayesian Principal  
Component Analysis.

J.N. Corcoran and J. Muller. Working Title: Perfect Simulation of Chemical Kinetic Networks.

J.N. Corcoran. Title: Tracking Fast Changes in Synchronous Flocking Behavior.

## PUBLICATIONS

D. Jennings and J.N. Corcoran, A Birth and Death Process for Bayesian Network Structure Inference. in *Probability in the Engineering and the Information Sciences* (2017) 39:1-11.

J.N. Corcoran, D. Jennings, and P. VaughanMiller, Perfect and  $\varepsilon$ -Perfect Simulation Methods for the One-Dimensional Kac Equation. In *Monte Carlo Methods and Applications* (2016) 22(4): 291-305.

J.N. Corcoran and W. Mao, A Class Coupler for Perfect Sampling from Continuous Distributions With and Without Atoms. In *Journal of Statistical Theory and Applications* (2011) 10(3): 501-518.

J.N. Corcoran and W. Mao, A Class Coupler for a Perfect Metropolis-Hastings Algorithm for Mixture Distributions with Applications to Bayesian Hypothesis Testing. In *Computational Statistics* (2009) 8(2): 214-238.

J.N. Corcoran, U. Schneider, and H. -B. Schüttler, Perfect Stochastic Summation in High Order Feynman Graph Expansions. In *International Journal of Modern Physics C* (2006) 17(11): 1527-1549.

J.N. Corcoran and U. Schneider, Pseudo-Perfect and Adaptive Variants of the Metropolis-Hasting Algorithm with an Independent Candidate Density. In *The Journal of Statistical Computation and Simulation* (2005) 75(6): 459-475.

U. Schneider and J.N. Corcoran, Perfect Sampling for Bayesian Variable Selection in a Linear Regression Model, In *The Journal of Statistical Planning and Inference* (2004) 126(1): 153-171.

J.N. Corcoran and U. Schneider, Shift and Scale Coupling Methods for Perfect Simulation, In *Probability in the Engineering and Information Sciences* (2003) 17: 277-303.

J.N. Corcoran and R.L. Tweedie, Perfect Sampling From Independent Metropolis-Hastings Chains. In *Journal of Statistical Planning and Inference* (2002) 104/2: 297-314.

J.N. Corcoran and R.L. Tweedie, Perfect Sampling of Ergodic Harris Chains. In *Annals of Applied Probability* (2001) 11(2): 438-451.

R.L. Tweedie and J.N. Corcoran, Perfect Sampling and Queueing Models. In *Proceedings 38th Annual Allerton Conference on Communication, Control, and Computing* (refereed) (2000) 1125-1134.

Foss, S.G., Tweedie, R.L., and Corcoran, J.N. Simulating the Invariant Measures of Markov Chains Using Backward Coupling at Regeneration Times. In *Probability in the Engineering and Information Sciences* (1998) 12: 303-320.

## PRESENTATIONS

Seminar, Center for Simulational Physics, University of Georgia, August 2019. Talk  
Title: Efficient Simulation of a Disordered Ferromagnet on a Random Field.

Colloquium, Department of Applied Mathematics, CU Boulder, September 2018. Talk  
Title: Birth, Death, and Barcodes: A Story of Discretization.

Colloquium, Invited Speaker at AMS, Colorado School of Mines, April 20th 2018. Talk  
Title: A Birth-and-Death Process for the Discretization of Continuous Attributes in  
Bayesian Network Structure Recovery.

Math Club Invited Talk, University of Colorado, Boulder, CO 2014. Title: To See  
Infinity.

Seminar, Invited Talk, Statistics, Colorado State University, Fort Collins, CO 2014.  
Title: Where Dem Ants At? Multiple Target Tracking.

Seminar, Invited Talk, Statistics, Colorado State University, Fort Collins, CO 2013.  
Title: A Perfect Particle Filter with an Application to Target Tracking.

Seminar, Invited Talk, Department of Mathematics, Whitman College, Walla Walla,  
WA 2008. Title: The Effect of Discretization on the Recovery of Bayesian Networks.

Complex Systems Seminar, Department of Applied Mathematics, University of Col-  
orado, Boulder, CO 2008. Title: Computational Simplifications for Searching Bayesian  
Networks.

Workshop on the Practice and Theory of Stochastic Simulation, Invited Talk, Palo  
Alto, CA, October 22-26, 2007. Title: Efficient Graph Counting Techniques for MCMC  
Recovery of Bayesian Graphical Models.

Statistical Colloquium Series, Invited Talk, Department of Statistics, University of Geor-  
gia, Athens, GA 2006. Title: The Effect of Discretization on the Recovery of Bayesian  
Networks.

Colloquium, Invited Talk, Department of Mathematical Sciences, Clemson University,  
2005. Title: Perfect Simulation for ARCH Models.

Conference, Invited Talk, Interface 2002, Montreal, Canada, 2002. Title: Shift and  
Scale Coupling Methods for Perfect Simulation.

Seminar, Invited Talk, Department of Statistics, Colorado State University, Fort Collins,  
CO 2001. Title: Stochastic Summation of High-Order Feynman Diagram Expansions.

Seminar, Two-Part Invited Talk, National Center for Atmospheric Research, Geophys-  
ical Statistics Project, Boulder, CO 2001. Title: Perfect Simulation, A Tutorial.

Probability and Statistics Seminar, Department of Applied Mathematics, University of  
Colorado, Boulder, CO 2001. Title: Stochastic Summation of High-Order Feynman  
Diagram Expansions.

Conference, Invited Talk, Theory and Applications of Monte Carlo Methods in Statis-  
tics, University of Florida, January 2001. Title: Scaled and Layered MultiShift Coupling  
for Perfect Simulation.

Conference, Invited Talk, The Southern Regional Council on Statistics Summer Research Conference, Colonial Williamsburg, VA 1999. Title: Markov Chain Monte Carlo Methods.

Seminar, Invited Talk, Center for Statistical Physics, Department of Physics, University of Georgia, Athens, GA 1999. Title: Slice Samplers, Perfect Slice Samplers, and Perfect Simulation of the Ising Model.

Seminar, Invited Talk, Department of Applied Mathematics, University of Colorado, Boulder, CO 1999. Title: Perfect Simulation with Applications to Statistical Physics.

Statistical Colloquium Series, Department of Statistics, University of Georgia, Athens, GA 1998. Title: Perfect Simulation Using Backward Coupling Techniques.

Seminar co-speaker with Christopher K. Wikle, Department of Statistics Colorado State University, Fort Collins, CO 1997. Title: Hierarchical Bayesian Space-Time Models and Convergence Visualization of High-Dimensional Gibbs Samplers.

Statistics Seminar, Department of Statistics Colorado State University, Fort Collins, CO 1998. Title: Perfect Sampling in MCMC Algorithms.

## HONORS

- The Subaru Educator Spotlight Award, 2003.
- Lilly Teaching Fellow nominee for excellence in teaching, University of Georgia, nominated by faculty, 2000.
- James L., M. Leslie & Edna Madison Memorial Award (Outstanding Graduate Student in Mathematical Statistics), Colorado State University, 1998.
- Duane C. Boes Excellence in Teaching Award, Colorado State University, 1998.
- Franklin A. Graybill Linear Models Award, Colorado State University, 1997.
- Outstanding Mathematics Instructor, Front Range Community College, 1996.

## TEACHING EXPERIENCE

- August 2000- Present (University of Colorado, Department of Applied Mathematics)
  - APPM 1350 Calculus 2 for Engineers:  
Spring 2005
  - APPM 4/5120 Introduction to Operations Research:  
Spring 2001
  - APPM 5440 Applied Analysis I:  
Fall 2011, Fall 2015
  - APPM 4/5520 Introduction to Mathematical Statistics:  
Spring 2004, Fall 2005, Fall 2008, Fall 2009, Fall 2010, Fall 2011, Fall 2012, Fall 2013, Fall 2014, Fall 2015, Fall 2016, Fall 2017, Special Grad Only Version in Fall 2017 and Fall 2018, Fall 2019
  - APPM 5530 Mathematical Statistics:  
Fall 2018, Fall 2019, Fall 2020, Fall 2021

- APPM 4/5560 Markov Processes, Queues, and Monte Carlo Simulations:  
Fall 2003, Fall 2004, Fall 2009, Fall 2010, Fall 2013, Spring 2019, Spring 2020, Spring 2021
  - APPM 4/5570 Statistical Methods:  
Fall 2000, Spring 2001, Fall 2002, Fall 2003
  - APPM 4/5540 Introduction to Time Series:  
Spring 2002, Spring 2006, Spring 2008, Spring 2010, Spring 2012
  - APPM 5570 Special Topics Course in Computational Bayesian Statistics:  
Spring 2018
  - APPM 6520 Mathematical Statistics:  
Spring 2002, Spring 2009, Fall 2016
  - APPM 7400 Special Topics Course in Generalized Linear Models: Fall 2005
  - APPM 7400 Special Topics Course in Stochastic Differential Equations:  
Fall 2002, Fall 2010
  - APPM 7400 Special Topics Course in Stochastic Simulation:  
Fall 2001, Fall 2005, Fall 2008, Fall 2012, Fall 2018
  - APPM 7400 Special Topics Course in Measure Theoretic Probability:  
Spring 2014, Spring 2017
- August 1998- May 2000 (University of Georgia, Department of Statistics, Athens, GA)  
Mathematical Statistics I and II, Statistical Methods I, Applied Stochastic Processes, Special topics course to prepare Ph.D. candidates for qualifying examinations.
- August 1995–December 1997 (Colorado State University, Department of Statistics, Fort Collins, CO)  
General Statistics, Introduction to Statistical Methods, Experimental Design.
- August 1994-December 1996 (Front Range Community College, Fort Collins, CO)  
College Algebra, College Trigonometry, Calculus I and II.
- August 1993-May 1994 (Colorado State University, Department of Mathematics, Fort Collins, CO)  
Calculus for Physical Scientists I and II.
- August 1991-December 1993 (Purdue University, West Lafayette, IN)  
College Algebra, College Trigonometry, Calculus for Physical Scientists I (recitation) and II (class and recitation), Business Calculus II.

STUDENTS  
SUPERVISED

Joy Muller, Ph.D. in progress. Working Title: MCMC Methods for Chemical Kinetic Networks.

Caleb Miller, Ph.D. in progress. Tentative Title: Data Fusion and Bayesian Monte

Carlo Methods.

Max Howard, M.S. in Mathematics, completed December 2020. Project: Perfect Uniform Sampling of Linear Extensions.

Aidan Bohenic, M.S. completed May 2020. Title: Analysis of Z Prime.

Jiafan Qian, M.S. completed May 2020. Title: Use of the Expectation Maximization Algorithm to Recover Bayesian Network Structure With Incomplete Data.

Nicole Woytarowicz, M.S. Completed May 2018. Title: Discretizing Continuous Attributes of a Bayesian Network With a Birth and Death Process Based on Minimum Description Length.

Denis Kazakov, M.S. Completed May 2018. Title: State Denoised Recurrent Neural Networks (Co-Advised with Michael C. Mozer, Dept. of Computer Science).

Evan Sidrow, M.S. Completed May 2018. Title: Network Structure Sampling in Bayesian Networks via Perfect Sampling from Linear Extensions.

Dale Jennings, Ph.D. Completed December 2016. Title: High Dimensional Sequential MCMC Samplers.

Paul VaughanMiller, Ph.D. (on hold). Tentative Title: Reversible Jump MCMC for Direct Simulation Monte Carlo with Applications to Rarefied Gas Dynamics

Raymond Dao, M.S. Completed August 2015. Title: Probabilistic and Statistical Methods for Target Tracking

Dai Tran, M.S. Completed August 2013. Title: Minimum Description Length Top-Down Search Strategy for Discretization of Bayesian Networks.

Nicholas Levine, M.S. Completed August 2011, Title: Using Minimum Description Length for Discretization Classification of Data Modeled by Bayesian Networks.

Rori Pegnetter, M.S. Completed December 2008, Title: Bayesian Network Applications in Economics.

Nathan Aragon, Ph.D. Completed December 2008, Titles: Rare Events Simulation, Auxiliary Variable Methods in MCMC.

Nicandro Flores, M.S. Completed December 2007, Title: Counting Directed Acyclic Graphs and its Applications to Monte Carlo Learning of Bayesian Networks.

Josh Hemann, M.S. Completed December 2007, Title: Spectral Analysis of Pollutant Time Series.

Victor Wong, M.S. Completed May 2007, Title: An Improvement Over Particle Filtering Through Perfect Simulation.

Wenjin Mao, Ph.D. Completed December 2007, Title: Dimension Jumping and Auxiliary Variable Techniques for Markov Chain Monte Carlo Algorithms.

Jian Wang, Ph.D. Completed May 2007, Title: Recovering Bayesian Networks Through MCMC with Applications to Gene Regulatory Networks.

Theodore VanRooy, M.S. Completed August 2006.

Hong Liu, Ph.D. Completed August 2006, Title: Rare Events, Heavy Tails, and Simulation.

Marcio Carvalho, Ph.D. Completed May 2005, Title: Applying Perfect Simulation to solve Stochastic Difference Equations that arise from certain Time Series Models.

Eileen Daly, M.S. Completed December 2003, Title: A Comparison of Methods of Spectral Analysis of Nonstationary Time Series within a Spatial Framework.

Ulrike Schneider, Ph.D. Completed May 2003, Title: New Techniques in Perfect Simulation with Applications to Bayesian Model Selection and Climate Modeling.

Irfan Tareen, M.S. Completed May 2000, Title: Stochastic Volatility Models, A Maximum Likelihood Approach. (University of Georgia)

CONFERENCES  
AND WORKSHOPS  
ATTENDED

RESIM 2018: 12th International Workshop on Rare-Event Simulation, KTH Royal Institute of Technology, Stockholm, Sweden, August 2018.

Workshop on the Practice and Theory of Stochastic Simulation, Palo Alto, CA, October 2007.

The 6th International Workshop on Rare Event Simulation (RESIM 2006), Bamberg, Germany, October 2006.

The 29th Conference on Stochastic Processes and their Applications, Angra dos Reis, Rio de Janeiro, Brazil, August 2003.

The First European Meeting on Spatial and Computational Statistics, Ambleside, UK, September 2000.

2000 NBER/NSF Workshop on Time Series Analysis, Colorado State University, Fort Collins, CO, September 2000.

Symposium 2000- Inference for Stochastic Processes, University of Georgia, Athens, GA, May 2000.

Warwick Randomised Algorithms and Stochastic Simulation, University of Warwick, Warwick, UK, July 1998.

PROFESSIONAL  
SERVICE

□ **Editor for:** *Involve: A Journal of Mathematics*

“Involve is a self-sustaining long-term scientific journal dedicated to showcasing and encouraging the highest quality mathematical research involving students (at all levels). The editorial board consists of several esteemed individuals who share a wealth of experience in dealing with and nurturing student involvement in important research. ...each manuscript should include a minimum of 1/3 student authorship.”



- **Referee for:** *Mathematics and Computers in Simulation*  
*The Annals of Applied Statistics*  
*SIAM Undergraduate Research Online (SIURO)*  
*The Journal of Applied Probability*  
*The Journal of Computational and Graphical Statistics*  
*The Journal of Environmental and Ecological Statistics*  
*The Journal of Statistical Computation and Simulation*  
*EURASIP Journal on Applied Signal Processing*  
*Computational Statistics and Data Analysis*
  
- **Reviewer for:** *Journal of Biopharmaceutical Statistics* *Journal of the American Statistical Association*  
*McGraw-Hill Publishing Chapman & Hall/CRC Press*
  
- **University Committees** IGP Seed Grant Review Committee (2015)  
Member, Council on Research and Creative Work (Fall 2008- 2010)
  
- **Graduate Committee Member for:**  
Liam Madden (Ph.D. Applied Mathematics)  
Erik Johnson (Ph.D. Applied Mathematics)  
Zhenhua Wang (Ph.D. Mathematics)  
Xiaoliu Chen (M.S. Mathematics)  
Wenqi Zhang (M.S. Applied Mathematics)  
Justin Cai (M.S. Computer Science)  
Joshua Aurand (Ph.D. Applied Mathematics)  
Owen Madin (Ph.D. Chem. and Bio. Engineering)  
Antony Pearson (Ph.D. Applied Mathematics)  
Joshua Aurand (Ph.D. Applied Mathematics)  
Wenqi Zhang (Ph.D. Applied Mathematics)  
Erika Zetterland (Ph. D. Astronomy)  
Anna Broido (Ph.D. Applied Mathematics)  
Eric Kightley (Ph.D. Applied Mathematics)  
Farhad Pourkamali Anaraki (Ph.D. Electrical Engineering)  
Natalie Coston (Ph.D. Mathematics)  
Victoria Slattum (M.S. Applied Mathematics)  
Jacob Mink (M.S. Applied Mathematics)  
Lukas Goetz-Weiss (M.S. Applied Mathematics)  
Dengli Yang (M.S. Economics)  
Kathleen Smith (Ph.D. Mathematics)  
Gavin Medley (M.S. Applied Mathematics)  
Noah Williams (Ph.D. Mathematics)  
Hillary Fairbanks (Ph.D. Applied Mathematics)  
Zachary Mullen (Ph.D. Applied Mathematics)  
Martha Bodine (Ph.D. Electrical Engineering) Branden Olsen (M.S. Applied Mathematics)  
Yevgen Matviychuk (Ph.D. Electrical Engineering)  
Tony Wong (Ph.D. Applied Mathematics)  
Ashar Ali (Ph.D. Applied Mathematics)  
Paulo Saraiva (Ph.D. Economics)

Kathleen Smith (Ph.D. Mathematics)  
 Farhad Pourkamali (Ph.D. Electrical Engineering)  
 Nathan Monnig (Ph.D. Applied Mathematics)  
 Yuanting Chen (Ph.D. Applied Mathematics)  
 Ashar Ali (Ph.D. Applied Mathematics)  
 Christopher Aicher (Ph.D., Applied Mathematics)  
 Tony Wong (Ph.D., Applied Mathematics)  
 Colton Dunlap (Ph.D. Electrical, Computer, and Energy Eng.)  
 Henry Romero (Ph.D., Applied Mathematics)  
 Kendra Kumley (Ph.D. Electrical, Computer, and Energy Eng.)  
 Liang Zhang (Ph.D. Mathematics)  
 Nathan Wakefield (Ph.D. Mathematics) Derek Eby (M.S., Mathematics)  
 Marshall Carpenter (M.S., Applied Mathematics)  
 Michael Noyes (Ph.D., Mathematics)  
 Eun Hyea Kim (Ph.D., Mathematics)  
 Jerrad Hampton (Ph.D., Applied Mathematics)  
 Alireza Nejadmalayeri (Ph.D., Mechanical Engineering)  
 Abhishek Jaialtilal (Ph.D., Computer Science)  
 Paige Cudworth (Ph.D., Mathematics)  
 Beth Hegland (M.S., Applied Mathematics)  
 Emily Pavey (M.S., Mathematics)  
 Julia Sando Hilton (M.S., Applied Mathematics)  
 Marc Formichella (Ph.D., Mathematics)  
 Timothy Schumacher (Ph.D., Mathematics)  
 Edward Ou (Ph.D., Civil Engineering)  
 Daniel Cooley (Ph.D., Applied Mathematics)  
 Richard McNamara (Ph.D., Applied Mathematics)  
 Abdel Ettouhami (Ph.D., Physics)  
 Kenneth Berenhaut (Ph.D., Statistics, University of Georgia)  
 Charles Rose (Ph.D., Forestry, University of Georgia)  
 Hector De los Santos (Ph.D., Forestry, University of Georgia)  
 Brian Bride (Ph.D., Social Work, University of Georgia)

□ **Departmental Committees/ Services:**

Primary Unit Evaluation Committee (Dougherty, Chang), Fall 2020  
 Department Colloquium Chair, Fall 2020  
 Probability and Statistics Prelim Chair, Fall 2020  
 Post Tenure Review Committees (Bortz, Li, Julien), Spring 2018  
 Primary Unit Evaluation Committee for Anne Dougherty, Fall 2017  
 Post Tenure Review Committee for Manuel Lladser, Spring 2017  
 Faculty Search Committee, Fall 2015  
 Primary Unit Evaluation Committee for Adam Norris, 2015  
 Department 25th Anniversary Celebration Committee, Fall 2014-Spring 2015  
 Primary Unit Evaluation Committee Chair for Instructors Anne Dougherty, Christian Ketelsen, Murray Cox, Ryan Croke, and Sujeet Bhat  
 Colloquium Chair, AY 2013-2014  
 Comprehensive Review Committee for Juan Restrepo, 2012

Primary Unit Evaluation Committee for Manuel Lladser, 2011  
Primary Unit Evaluation Committee for Vanja Dukic, 2009  
Comprehensive Review Committee for David Bortz  
First Year Graduate Advisor, Fall 2008-present  
Graduate Committee, Fall 2000- Spring 2001, Fall2003- Spring 2004,  
Spr2005, Spr 2007, Fall 2008, Fall 2019-present  
Undergraduate Committee, Fall 2007-Spr 2008, Fall 2012  
Program Review Panel (PRP) Internal Report Committee 2003, 2009  
Instructor Search Committee, Spring 2002-Fall 2003, Fall 2012  
Faculty Search Committee, Fall 2000- Spring 2002, Fall 2004-2007, 2009,  
Fall 2011  
Departmental Colloquium Co-Organizer, Fall 2001-Spring 2002  
Probability and Statistics Seminar Co-Organizer, Fall 2000-?  
Probability and Statistics Preliminary Exam Committee, Fall 2000-? Anal-  
ysis Preliminary Exam Committee, Fall 2011

□ **Other:**

- Research consultant for CU Denver Department of Psychiatry research project: *Martial Arts as Early Intervention for Teen Drug Abuse*. PI: Robert Davies.
- Research consultant on NCAR project: *Development of Spatio-temporal and Multi-resolution Methods for Detecting the Impact of Volcanic and Solar Forcings in Climate*. Project headed by Philippe Naveau and Caspar Ammann.
- New course development:
  - Stochastic Simulation (APPM7400), Fall 2001.
  - Stochastic Differential Equations (APPM7400), Fall 2002.
  - Probability and Measure Theory (APPM7400), Spring 2014.
  - Mathematical Statistics (New Prelim Course) (APPM 5720), Fall 2017.
  - Computational Bayesian Statistics (APPM 5720), Spring 2018
- Session chair and member of the conference organizing committee for Symposium 2000- Inference for Stochastic Processes, University of Georgia, Athens, GA, May 2000.
- Research consultant for the Developmental Pathways Research Group, Department of Educational Psychology, 1998-2000. University of Georgia