

Monica C. Jackson

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USA

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Areas of expertise: Spatial statistics, statistical computation, disease surveillance

Education

Ph D, University of Maryland, 5/03

Major: Applied Mathematics and Scientific Computation

Supporting Areas of Emphasis: Statistics

Dissertation: A comparison of estimations methods for discrete spatial data on a lattice

MS, Clark Atlanta University, 5/94

Major: Applied Mathematics

Thesis: Neural network approach to control variational problems

BS, Clark Atlanta University, 5/92

Major: Mathematics

Professional Positions

Academic

American University, Associate Professor of Statistics, 09/11- Present

American University, Assistant Professor of Statistics, 8/05 – 08/11

Emory University, Post doctoral researcher, 5/03 – 5/05

University of Maryland, Math Instructor, 6/02 – 8/02

University of Maryland, Research Assistant, 8/01 – 6/02

University of Maryland, Teaching Assistant, 8/95 – 5/01

Government

National Institutes of Health, National Cancer Institute, Mathematical Statistician, 5/07 – 2/08 (Junior sabbatical leave)

Research Centers

Institute for Pure and Applied Mathematics, University of California, LA, Visiting Researcher (sabbatical leave), 8/11-12/11

Statistical and Applied Mathematical Sciences Institute, Research Fellow, 8/09–1/10

Industry

Motorola Inc., Summer Intern, 6/95 – 8/96

Lucent Technologies, Summer Intern, 6/93 – 8/94

Xerox Corporation, Summer Intern, 6/91 – 8/92

RESEARCH

Publications(Order of co-authors is as published and prioritized by contribution, as is customary in the field. Except for last author which signifies senior author.)

Perrin, E., Sellers, T., Maxwell, L.H., Morgan, M., Davis, S-M, Cook, C., **Jackson, M.C.**, Sellers, K.F. (2015). "A Statistical Analysis of Weight Gain During the Freshman Year of College", *Journal of Student Research*, 4(1): 144-151.

Jackson, M. C., (2014). Testbank for use with the Introduction to the Practice of Statistics, 8th edition (W.H. Freeman)

Arab, A., **Jackson, M. C.**, and Kongli, C. (2014). "Modelling the effects of weather and climate on malaria distributions in West Africa,"23(126). (DOI:10.1186/1475-2875-13-126)

Veach, E., Xique, I., Johnson, J., Lyle, J., Almodovar, I., Sellers, K.F., Moore, C.T., and **Jackson, M.C.** (2014). "Race matters: analyzing the relationship between colorectal cancer mortality rates and various factors within respective racial groups", *Frontiers in Public Health*, 2(239). (DOI: 10.3389/fpubh.2014.00239)

Jackson, M. C., Trotman, A., Stephens, M., and Sellers, K. F. (2012). "The Effect of Latency Variables on Repeated Measures Inference Applied to the Measurement of Risk-taking as a function of Psychopathy," *Quality and Quantity* (DOI:10.1007/s11135-011-9475-4)

Jackson, M. C., and Macpherson, B. (2011). Testbank for use with the Introduction to the Practice of Statistics, 7th edition (W.H. Freeman)

Thompson, W., McGinnis, S., McDaniel, D., Sexton, J., Petit, R., Anderson, S., Sellers, K., and **M. Jackson, M. C.** (2011). "A Geographical and Statistical Analysis of Childhood Leukemia Deaths Relating to the Locations of Nuclear Power Plants," *Advances and Applications in Statistical Science*, 6(5).

Jackson, M. C., Gray, M. W., Lu, J., and Solana, H. (2011). "The Integration of the SAS Certificate Program into the Classroom Teaching Environment," *International Mathematical Forum*, 6(50)

Shavers, V. L., **Jackson, M. C.**, Sheppard, V. B. (2010). "Racial/ethnic patterns of uptake of colorectal screening,"*Journal of the National Medical Association*,102(7), 621–636

Jackson, M. C., Huang, L., Xie, Q., Tiwari, R. (2010). "A Modified Version of Moran's I ,"*International Journal of Health Geographics*, 9(33)

Jackson, M. C., Colson, A., Johansen, L., Furlong, C., Sellers, K. F. (2010). "Modelling the effect of climate change on the prevalence of Malaria in Western Africa,"*Statistica Neerlandica*, 64(4), 388-400

Jackson, M. C. (2010). "A comparison of estimation methods for conditionally-specified spatial data,"*International Journal of Pure and Applied Mathematics*, 58(2), 169–184

- Jackson, M. C.**, Huang, L., Luo, J., Hackey, M., Feuer, E. (2009). "Comparison of tests for spatial heterogeneity on data with global clustering patterns and outliers," *International Journal of Health Geographics*, 8(55)
- Jackson, M. C.**, Davis, W., Waldron, W., McNeel, T., Pfeiffer, R., Breen, N. (2009). "Impact of geography on mammography use in California," *Cancer Causes and Control*, 20(8)
- Shavers, V., Harlan, L., **Jackson, M. C.**, Robinson, J. (2009). "Racial/ethnic patterns of care for pancreatic cancer," *Journal of Palliative Medicine*, 12(7), 623–630
- Jackson, M. C.**, Sellers, K. F. (2008). "Simulating discrete spatially correlated Poisson data on a lattice," *International Journal of Pure and Applied Mathematics*, 37(4), 137–154
- Jackson, M. C.**, Waller, L. A. (2005). "Exploring goodness-of-fit and spatial correlation using components of Tango's index of spatial clustering," *Geographical Analysis*, 37(4), 371–382
- Russek-Cohen, E., **Jackson, M. C.** (2002). "Permutation Tests," *Encyclopedia of Environmetrics*, pp. 1547 – 1549, London: Wiley
- Jackson, M. C.** (2001). "Spatial data analysis for discrete data on a lattice," *Contemporary Mathematics*, 4, 53–58

Research in progress

- Jackson, M. C.** and Lynen, A. "An Exploration of the Relationship Between Quality of Care and Birth Outcomes in the Dominican Republic," (Submitted)
- Mireles, S. and **Jackson, M. C.** "Assessing Obesity and Chronic Disease Disparity in Latin American Populations Around the U.S.." (In Preparation; Not Yet Submitted)
- De Mendoza, A., **Jackson, M. C.**, and Sheppard, V. "The role of knowledge on genetic counseling and testing for BRCA 1/2 in black breast cancer survivors at increased risk of carrying a mutation." (Submitted)
- Pan, S. and **Jackson, M. C.** "Modelling the effect of socioeconomic indicators on prevalence of HIV in Washington, D.C.." (In Preparation; Not Yet Submitted)
- Aubry-Blanchard, C., Xique, I., Johnson, J., Lyle, J., Veach, E., Almodova, I., and **Jackson, M. C.** "Race, ethnicity and geographic variations in colorectal cancer mortality in the U.S." (Submitted)
- Coauthor, Brunette, K., **Jackson, M. C.**, and Bratman, E. "Access to public transportation and improved livelihoods in Bogota, Colombia," (Submitted)
- Jackson, M. C.** and Labove, G. "Compliance of perioperative antibiotic dosing in office-based surgery," (Resubmitted)
- Jackson, M. C.** and Glenn, N. "The Effect of Spatial Dependence on the Empirical Likelihood." (In Preparation; Not Yet Submitted)

Presentations Given

- Society for the Advancement of Chicano's and Native Americans in Science "Modelling the effects of weather and climate on malaria distributions in West Africa," Washington, DC. 10/15
- Society for the Advancement of Chicano's and Native Americans in Science "Using statistics to examine the risk-taking propensity of psychopaths," Washington, DC. 10/15
- Morgan State University, Department of Mathematics, "Modelling the effects of weather and climate on malaria distributions in West Africa," Baltimore, MD 4/15
- American University, Leadership Academy, "Criminal minds: Using statistics Using statistics to examine the risk-taking propensity of psychopaths," Washington, DC. 10/14
- Howard Capstone Institute, STEM summer professional development institute, "Creating Successful Peer-Reviewed Publications with Undergraduate," Winston-Salem, NC. 6/14
- Joint Mathematics Meeting, American Mathematical Society special session, "The Effect of Latency Variables on Repeated Measures," Baltimore, MD. 1/14
- Society for the Advancement of Chicano's and Native Americans in Science "Modeling disease outbreaks using statistical methods," Los Angeles, CA. 10/14
- American University, High Performance Computing Seminar, "Detecting global clustering patterns and outliers on spatially correlated data for disease surveillance," Washington, DC. 12/13
- University of Northern Iowa, Department of Mathematics, "Impact of Geography on Mammography use in California," Cedar Falls, IA. 10/13
- Joint Statistics Meeting, American Statistical Association, "Defining Recovery Stages in Breast Cancer," Montreal, Canada. 8/13
- American University, Public Health Program, "Impact of Geography on Mammography Use in California," Washington, DC. 3/13
- American University, Center for Teaching Learning and Research, "Detecting global clustering patterns and outliers on spatially correlated data for disease surveillance," Washington, DC. 4/13
- Statistical and Applied Mathematical Sciences Institute, Health-care distributed health services research group, "Impact of geography on mammography use in California," Raleigh, NC. 7/12
- Howard University, Department of Mathematics, "Impact of geography on mammography use in California," Washington, DC. 3/12.
- Joint Statistics Meeting, American Statistical Association, "Detecting global clustering patterns and outliers on spatially," San Diego, CA. 8/12.
- Society for the Advancement of Native American and Chicanos in Science, SACNAS "Impact of geography on mammography use in California, Seattle, Washington. 12/12.
- UCLA, "Statistical methods for evaluating spatial heterogeneity," Institute of Pure and Applied Mathematics, Los Angeles, CA. 11/11.

Miami University, "Detecting Global Clustering Patterns and Outliers on Spatially Correlated data for Disease Surveillance," Oxford, OH. 7/11.

Conference for African American Researchers in the Mathematical Sciences, CAARMS, "Impact of Geography on Mammography Use in California," Los Angeles, CA. 6/11

Virginia Tech, "Detecting Global Clustering Patterns and Outliers on Spatially Correlated data for Disease Surveillance," Arlington, VA. 4/11.

University of Maryland, "Comparison of tests for spatial heterogeneity on data with global clustering patterns and outliers," Baltimore, MD. 2/11

Statistical Physics Super Computer Conference, Texas Southern University, "Comparison of tests for spatial heterogeneity on data with global clustering patterns and outliers," Houston, TX 12/10

Joint Statistics Meeting, American Statistical Association, "The effects of spatial correlation on the empirical likelihood," (with Nancy Glenn), Vancouver, Canada 8/10

MedStar Health Research Institute, "Detecting global clustering patterns and outliers on spatially correlated data for disease surveillance," Hyattsville, MD 6/10

Georgetown University, Department of Mathematics, "Comparison of tests for spatial heterogeneity on data with global clustering patterns and outliers," Washington, DC 4/10

Grambling State University, College of Arts and Sciences, "Detecting global clustering patterns and outliers with areal data," Grambling, LA 3/10

Institute for Pure and Applied Mathematics, "Detecting global clustering patterns and outliers on spatially correlated data for disease surveillance," Los Angeles, CA 3/10

North Carolina State University, Department of Statistics, "Evaluation of test for spatial heterogeneity on areal data with clusters and clustering," Raleigh, NC 10/9

Statistical and Applied Mathematics Sciences Institute, "Evaluation of test for spatial heterogeneity on areal data with clusters and clustering," Durham, NC 9/09

57th Session of the International Statistics Institute, "Integration of professional certification exams into graduate classes," Durban, South Africa 7/09

Clark Atlanta University, "Building careers: The legacy of CAU mathematics department," Atlanta, GA 10/08

University of Maryland, SPIRAL Program, "The spatial analysis of public health data," College Park, MD 7/08

International Biometrics Society, Eastern North American Region, "Integrating the SAS certification into the Academic Teaching Environment," (with Jun Lu), Washington, DC 3/08

National Institutes of Health, National Cancer Institute, "Comparison of tests for global clustering and local cluster detection on data with global clustering pattern and outliers," Bethesda, MD 3/08

US Census Bureau, "Exploring goodness-of-fit and spatial correlation using components of Tango's index of spatial clustering," Hyattsville, MD 3/07

National Institutes of Health, National Cancer Institute, "Exploring goodness-of-fit and spatial correlation using components of Tango's index of spatial clustering," Bethesda, MD 2/07

Joint Statistics Meeting, American Statistical Association and Caucus for Women in Statistics, "Networking for fun and for profit," Seattle, WA 8/06

University of Maryland, Mathematics Department, "Life after graduate school," College Park, MD 4/06

American University, Democratic Women and Friends of American University, "Gender bias and academia," Washington, DC 11/05

Applied Probability Conference, Institute for Operations Research and the Management Sciences, "Detecting disease clusters through simulation and modeling," Ottawa, Canada. 7/05

University of Maryland, SPIRAL Program, "Disease clustering," College Park, MD 5/05

Bernard College, GE Scholars Program, "Our road to the Ph.D.," (with Kim Sellers), New York, NY 4/05

Infinite Possibilities Conference, "Exploring goodness-of-fit and spatial correlation using components of Tango's index of spatial clustering," Atlanta, GA 4/05

Morehouse College, Department of Mathematics, "Exploring goodness-of-fit and spatial correlation using components of Tango's index of spatial clustering," Atlanta, GA 3/05

James Madison University, Department of Mathematics, "Exploring goodness-of-fit and spatial correlation using components of Tango's index of spatial clustering," Harrisonburg, VA 2/05

American University, Department of Mathematics and Statistics, "Exploring goodness-of-fit and spatial correlation using components of Tango's index of spatial clustering," Washington, DC 2/05

Clemson University, Department of Mathematics, "Exploring goodness-of-fit and spatial correlation using components of Tango's index of spatial clustering," Clemson, SC 1/05

Pomona College, Department of Mathematics, "Statistical issues in disease clustering and surveillance," Claremont, CA 1/05

University of the Sciences of Philadelphia, Department of Mathematics, "Statistical issues in disease clustering and surveillance," Philadelphia, PA 1/05

Lawrence Livermore National Laboratory, "Exploring goodness-of-fit and spatial correlation using components of Tango's index of spatial clustering," Livermore, CA 11/04

University of Texas, "Exploring goodness-of-fit and spatial correlation using components of Tango's index of spatial clustering," Department of Mathematical Sciences, El Paso, TX 11/04

Spelman College, Department of Mathematics, "Statistical issues in disease clustering and surveillance," Atlanta, GA 10/04

Morgan State University, Department of Mathematics, "Statistical issues in disease clustering and surveillance," Baltimore, MD 9/04

Rochester Institute of Technology, Department of Mathematics and Statistics, "Exploring goodness-of-fit and spatial correlation using components of Tango's index of spatial clustering," Rochester, NY 8/04

Conference for African American Researchers in the Mathematical Sciences (CAARMS), "Detecting disease clusters and disease surveillance," Berkeley, CA 6/04

International Biometrics Society, Eastern North American Region, "Exploring goodness-of-fit and spatial correlation using components of Tango's index of spatial clustering," Pittsburgh, PA 3/04

Morehouse College, Department of Mathematics, "Applied Mathematics and its application to public health and disease surveillance," Atlanta, GA 3/04

Lincoln University, Department of Mathematics, "Following your dreams and finding your passions: Why I chose to become a mathematician," Lincoln University, PA 2/04

Joint Mathematics Meeting, NAM Granville-Brown-Hayes- Session of Presentations by Recent Doctoral recipients in the Mathematical Sciences, "A comparison of estimation methods for spatial data analysis with discrete data on a lattice," Baltimore, MD 1/03

International Biometrics Society, Eastern North American Region, "Graduate and undergraduate experiences in biostatistics," Washington, DC 3/02

Center for Theoretical Studies of Physical Systems, "Neural network approach to control variational problems," Atlanta, GA 2/94

Posters Given

Society for the Advancement of Chicano's and Native Americans in Science (SACNAS), "Modelling the effect of climate change on the prevalence of Malaria in Western Africa," Washington, DC 10/15

Congress for the Committee for Women's Health 2015, "An Exploration of the Relationship Between Quality of Care and Birth Outcomes in the Dominican Republic," (with Lynen, A.) Washington, DC. 4/15.

Women in Statistics Conference, "Modelling the effect of climate change on prevalence of malaria in western Africa," Raleigh, NC. 5/14

Institute for Pure and Applied Mathematics, Workshop on Translating Cancer Data and Models to Clinical Practice, "Impact of Geography on Mammography Use in California," Los Angeles, CA. 2/14

Joint Mathematics Meeting, Mathematical Association of American "Race Matters: Analyzing the Relationship Between Colorectal Cancer Mortality Rates and Various Factors Within Respective Racial Groups," San Diego, CA. 2/12

Blackwell-Tapia Conference, "Modeling the prevalence of malaria in Western Africa," Columbus, OH 10/10

Conference for African American Researchers in the Mathematical Sciences, "Evaluating spatial models for discrete data," West Lafayette, IN 6/03

Mathematical Science Research Institute, "Spatial statistics for discrete data," Berkley, CA 11/02

Conference for African American Researchers in the Mathematical Sciences, "Simulation and analysis of spatial models for discrete data," Princeton, NJ 6/02

Society of Industrial and Applied Mathematics International Conference, Association for Women in Mathematics workshop, "Simulation and comparison of spatial models for discrete data on a lattice," San Diego, CA 7/01

Conference for African American Researchers in the Mathematical Sciences, "Spatial data analysis for discrete data on a lattice," Durham, NC 6/01

Conference for African American Researchers in the Mathematical Sciences, "Introduction to spatial data analysis," Baltimore, MD 6/00

Conference for African American Researchers in the Mathematical Sciences, "Spatial data analysis for Discrete Data," Ann Arbor, MI 6/99

Sessions organized

Society for the Advancement of Chicano's and Native Americans in Science (SACNAS), (with Young, M.), Session title: "Mathematicians Rock!," Washington, DC. 10/15

MAA MathFest, (with Washington, T.) Special session title: "Notes of a Native Son": The Legacy of Dr. Abdulalim A. Shabazz (1927-2014)," Washington, DC. 8/15

Society for the Advancement of Chicano's and Native Americans in Science (SACNAS), (with Young, M.), Session title: "Beauty and the Beast---Our Real Life Relationship with Mathematics," Los Angeles, CA. 10/14

Society for the Advancement of Chicanos and Native Americans in Science (SACNAS), (with Young, M.), Session title: "It's all math! Using math to solve world problems," San Antonio, TX 10/13

Panel discussions

Institute for Pure and Applied Mathematics, UCLA, "Grad School and Beyond: Advice for the Aspiring Mathematician," Los Angeles, CA. 11/14

Joint Statistics Meeting, American Statistical Association, "Success is not always perfect: Dealing with failure and obstacles," Boston, MA. 8/14

Infinite Possibilities Conference, Building Diversity in Science, "Access, Information, and Negotiation: Making your voice heard," Baltimore, MD. 3/12

International Biometrics Society, Eastern North American Region of the International Biometrics Society, "Diversity Day," Washington, DC. 3/12

Joint Statistics Meeting, Cavell-Brownie Scholars Program, "Success in Graduate School," Seattle, WA 8/11

Princeton University, Wesley L. Harris Scientific Society Conference, "Different paths to success," Princeton, NJ. 2/11

Contracts, Grants and Sponsored Research

Research grants and contracts

- Health and Human Services, "The Role of Mobile Health (M-Health) Technology in Breast Cancer Prevention among Hispanic Women", Personnel. (PI: M. De Jesus). Received \$4,872. Awarded 7/15
- National Security Agency, "Summer Program in Research and Learning (SPIRAL) at Morgan State," Received \$125,000. Co-PI (With L. Woodson). Awarded 3/15.
- Institute for Computational and Experimental Research in Mathematics, Travel grant to attend the Modern Math Workshop at the Society for the Advancement of Chicanos and Native Americans in Science Conference," Received \$2,000. Awarded 6/13.
- Center for Teaching, Research, and Learning, American University. Teaching enhancement grant," Received \$200. Awarded 8/13.
- Mathias Summer Undergraduate Research Award. "Cognitive and Affective Risk Perceptions of Cancer Recurrence on BRCA1/2 counseling use," Received \$500. Awarded 8/13.
- American University. Mapping racial/ethnic disparities in colorectal cancer screening and mortality rates," Faculty Research Award. \$2,000 1/10-1/11.
- Association for Women in Mathematics-NSF Travel grant, Received \$1,000. Awarded 3/11.
- Statistical and Applied Mathematical Sciences Institute (SAMSI). Awarded \$7,500 grant to participate in "Space-Time Analysis for Environmental Mapping, Epidemiology and Climate Change," workshop 08/09-12/09
- Statistical and Applied Mathematical Sciences Institute (SAMSI). Awarded Research Fellowship for junior faculty leave, Approximately \$15,000 grant. 10/07 – 1/08
- National Institutes of Health, National Cancer Institute, Awarded \$23,343.83 for contract #263-MQ-706620, "Comparison of Spatial Test for Global Clustering and Cluster Detection on data with varying Spatial Correlation Structure and Geographic Units," (Federal)05/07–08/07
- American University, College of Arts and Sciences. Awarded \$1500 grant for project "Mapping racial/ethnic disparities in colorectal cancer screening and mortality rates," 4/10 – 4/11
- American University Summer undergraduate research program. Awarded \$500 grant for project "Spatial mapping of colon cancer mortality rates," with Clementine Aubry-Blanchard, 05/10 – 08/10
- American University Faculty Research Award. Awarded \$4900 grant for project "Development of Statistical Methods to Predict Disease Outbreaks for Public Health Surveillance related to Bioterrorism," 4/09 – 4/10
- International Statistics Institute Travel Award, Sponsored by American Statistical Association. Awarded \$1500 grant for travel to the 57th Session of the International Statistics Institute in Durban, South Africa. Private. 08/09
- American University Summer undergraduate research program. Awarded \$500 grant for project "Modeling Malaria and Climate Change," with Abigail Colson, 05/07 – 08/07

American University Faculty Software Award. Awarded \$250 grant for GIS software 04/07

American University, College of Arts and Sciences. Awarded \$1000 grant from Dean's discretionary fund for software, travel, and a one course release from Ann Robyn Mathias funds, American University. 08/06 – 05/07

American University Summer undergraduate research program. Awarded \$500 grant for project "Epidemic: Will we know in time? The Statistical Modeling of Disease Spread," with Mark Meyer, 05/06 – 08/06

National Institute of Environmental Health Sciences (NIEHS) E50775. Awarded grant for post doctoral training at Emory University. (PI: Lance Waller) 5/03 – 5/05

Center for Theoretical Studies of Physical Systems (CTSPS), National Science Foundation, CREST Program. Awarded grant for tuition and stipend 08/92 – 05/02

University of Maryland graduate student support grant, Award funding for graduate study. 5/94 – 08/00

Professional contracts/Consulting

Morgan State University. Provide statistical support on project titled “Morgan TIDES”. Contracted 10/15-present.

Hayes, K. Provided statistical support for a project on cyberbullying. Contracted 8/15-10/15

Delta Decisions of DC, Washington, DC, Contracted, 5 hours per week. 5/14-8/15
Developing statistical methods in support of the DC Trust and the dcyouthisight.org system

American University, CAS faculty salary study. Provide an analysis of gender differences in faculty salaries. 8/12-5/15

Collaborative Applied Mathematics Problems (CAMPS). Provide pro bono statistical assistance for a variety of applied mathematics problems. Co-Founder (With O. Jennings). 8/13-present

DC Center for Aids Research, Washington, Dist. Of Columbia, Collaboration with HIV/AIDS researchers to provide statistical consultation. 8/14-present.

W.H. Freeman & Company. Contracted for \$2800 to develop online resources for the 8th edition of the textbook titled *Introduction to the practice of statistics* by Moore et al., 5/12 – 12/12

W.H. Freeman & Company. Contracted for \$4800 to edit and develop the text bank for the 8th edition of the textbook titled *Introduction to the practice of statistics* by Moore et al., 07/10 – 10/10

W.H. Freeman & Company. Contracted for \$3800 to edit and develop the text bank for the 7th edition of the textbook titled *Introduction to the practice of statistics* by Moore and McCabe, 07/10 – 10/10

W.H. Freeman & Company. Contracted for \$500 to review the 7th edition of the textbook titled *Introduction to the practice of statistics* by Moore and McCabe, 09/09–11/09

Trotman, A. Provided statistical analysis support for dissertation titled “The Relationship between Risk-

Taking and Psychopathy in a Sample of Inner-City Drug Users.” University of Maryland, Department of Psychology. 1/07 – 12-07.

Anderson, B. Provided statistical analysis support for dissertation. American University, Department of Psychology, Washington, DC. 5/06 – 6/06.

Smith, N. Provided statistical support for dissertation. American University, Department of Sociology 5/10-12/10

TEACHING

Teaching Experience

Graduate Courses

Spatial Statistics (American University, Spring 2013)

Applied Multivariate Analysis (American University, Fall 05)

Design of Experiments (American University, Spring 06–14)

Statistical Software (American University, Fall 06, 08-14)

Undergraduate Courses

Basic Statistics (Fall 05 and 09, Spring 06–10, Summer 14-15)

Calculus I (University of Maryland, Fall 95–00)

Calculus II (University of Maryland, Spring 96–01)

Non-Credit Instruction

Statistics Seminar director for the Summer Program in Research and Learning (SPIRAL). Morgan State University, Baltimore, MD summer 15

Statistics Seminar director for the Summer Undergraduate Mathematics Research Institute (SUMSRI). Miami University, Oxford, OH Summer.2011-13.

Faculty advisor for the Mellon program, Emory University. Advised 15 students on preparing for graduate school and writing proposals. 15 students, Emory University 05/05 – 08/05

Instructor for the Center for Theoretical Studies of Physical Systems summer math and science program, Clark Atlanta University. Prepared students for college admission and taught calculus. 4 participants. 05/05 – 08/05

Faculty advisor for undergraduate statistics students, American University. Advised 6 students on course selection. 01/08-present

Directed Student Learning

Internship Advisor, Alexis White (Masters), "Internship at Delta Decisions of DC," 5/15-8/15

Directed Individual/Independent Study, Alexis White (Undergraduate), "Analysis of DC youth program data," 1/15 – 5/15

Internship Advisor, Alexis White (Undergraduate), "Internship at Delta Decisions of DC," 8/14-5/15

Directed Individual/Independent Study, Jean Woolston (Undergraduate), "Statistics and Public Health," 1/15 – 5/15

Directed Individual/Independent Study, Tiffany Chang (Masters), "Cancer Worry," 1/15 – 5/15

Ph.D. Dissertation Committee Member, Francis Ereholo, (Doctoral), "Application of the Disposition Model to the Analysis of Longitudinal Binary Outcomes in the Presence of Incomplete Data," Defended 6/15.

Dissertation Committee Co-Chair, Jess Chen (Doctoral), "Local Spillovers in Bankruptcy," Researching. 8/13-present

Capstone/Senior/Honors Thesis, Amanda Lynen (Undergraduate), "An Exploration of the Relationship Between Quality of Care and Birth Outcomes in the Dominican Republic," 8/14 – 12/14

Supervised Research, Jeannie Woolston (Undergraduate), "Modeling HIV rates," 5/15 – 12/14

Capstone/Senior/Honors Thesis, Kate Brunette (Undergraduate), "Access to public transportation and improved livelihoods in Bogota, Colombia," 1/14 – 12/14

Directed Individual/Independent Study, Sean Warlick (Undergraduate), "Spatial clustering methods applied to bike transportation," 8/13 – 5/14

Supervised Research, Lauren C'Debaca (Undergraduate), "A Statistical and Geographical Analysis On the Demographics of a City and Its Effects On Crime Rates On Campuses," 5/14 – 8/14

Capstone/Senior/Honors Thesis, Stephanie Pan (Undergraduate), "Modelling the effect of socioeconomic indicators on prevalence of HIV in Washington, D.C.," 5/14-12/14

Internship Advisor, Eric Valentine (Masters), "Internship at SEC," 5/13-8/13

Supervised Research, Sarah Mireles (Undergraduate), "Assessing obesity and chronic disease disparity in Latin American populations around the U.S.," 8/13-12/13

Capstone/Senior/Honors Thesis, Abigail Colson (Undergraduate), "Defining Recovery Stages in Breast Cancer," 8/11-5/12

Ph.D. Dissertation Defense Committee Member, NedaAk, "A data analytic tool for measuring compositional variability," Project Defended 5/11

Ph.D. Dissertation Defense Committee Member, Boonyasit Warachan (Doctoral), "Appropriate Statistical Analysis," Project Defended 5/11

Master's Thesis Committee Chair, Clementine Aubry-Blanchard (Masters), "Race, Ethnicity and Geographic variation in colorectal cancer mortality among the U.S. population from 2005-2007," 8/10-5/11

Dissertation Committee Member, Labeed Mokatrin (Doctoral), "Bayesian Approach for Sample Selection Bias Correction," 5/07-5/11

Ph.D. Dissertation Committee Member, Annie Lo (Doctoral), Project Defended/Deposited. 5/05-12/11

Master's Thesis Committee Member, Anne Elguindi (Masters), "Cluster warping functions: A comparison of Hierarchical and Partitioning Methods in Creating Clusters Using Warping Functions," 1/10-1/11

Master's Thesis Committee Chair, Laura Johansen, "Modeling Malaria in Western Africa," American University, Statistics. 1/09 – 8/09

Master's Thesis Co-Committee Chair, Qian Xie, "Simulation Methods for spatial data," American University, Statistics. 1/09 – 5/09

Directed Individual/Independent Study, Clementine Aubry-Blanchard, "Mapping Colon Cancer Mortality 1/10 –5/11

Directed Individual/Independent Study, William Waldron, "Spatial trends of mammography screening rates in California," American University, Mathematics and Statistics. 5/08 – 11/08

Directed Individual/Independent Study, Abigail Colson, "Modelling the effect of climate change on the prevalence of Malaria in Western Africa," American University, Environmental Science. 5/07 – 3/08

Directed Individual/Independent Study, Daniel Yoo, "Time series analysis applied to the financial market for prediction," American University, Mathematics and Statistics. 1/07 – 8/07

Directed Individual/Independent Study, Helena Solana, "Integration of the SAS Professional Certification Examination into the Classroom," American University, Mathematics and Statistics. 1/07 – 8/07

Ph.D. Dissertation Committee Member, Neil Perkins, "ROC inference based on best linear combination of biomarkers affected by different sources of measurement error," American University, Mathematics and Statistics. 4/06 – 5/07

Master's Thesis Committee Member, Erik Hochweller, "Simulating computer virus spread and the effects of cure antiviruses," American University, Computer Science. 10/05 – 5/06

Pedagogical Innovations

Developed a new fully online course for STAT 525-Statistical Software. All course material was delivered electronically. Classes were held synchronicity utilizing the software Collaborate. At the end of the course, students were able to take the SAS certification exam at a local testing center and receive the globally recognized certification. Fall 13

Developed a new hybrid section for STAT 202-Basic Statistics. The course met online one day a week and face-to-face two days per week. Students utilized online delivery systems for all coursework. In addition, this class was presented "flipped" where lecture materials were presented online and class time was utilized for problem-solving sessions. Fall 14

SERVICE

American University

Academic Technology Steering Committee, 8/12- present

Assessment Committee 5/14-12/15

New building planning committee 8/15-present

Faculty Senate's Committee on Information Services. 5/12- 8/14

Public health director search committee. 5/12-5/14

Committee for the Development of Biostatistics Professional Master's Program. 8/14-5/15

Redevelop STAT 202 for Kogod Business School, Committee Chair. 1/14 – 5/15

Faculty Advisor, Leadership Academy. 8/13-present

Faculty retreat planning committee. 5/11-5/12

Colloquium Committee, 1/11-Present

Academic advisor for undergraduate and graduate statistics students, 08/06 - present

Educational Policy Committee, 5/07– 8/08

Statistics faculty search committee, 5/05 – 8/08 and 5/13-8/14

Environmental Science Search Committee. 5/12-8/14

Undergraduate Committee, 5/05– present

Graduate Admissions Committee, 5/06– 5/14

Merit Committee, 5/06– 8/07 and 5/13-8/14

Faculty recruiter for the College of Arts and Science recruitment fair 3/06, 3/07, 3/10

Development of Ph.D. in Environmental Science committee 8/06– 5/07

Emory University

Diversity Committee 8/04– 5/05

Martin Luther King Jr. Community Service Award Committee 8/04– 5/05

National

Treasurer, Delta Kappa Gamma International Society, 5/14 - Present

Faculty mentor, Capstone Institute at Howard University, 8/14 - Present

Editor, Journal Editor, Associate Editor, *Frontiers in Public Health*, Appointed. 1/13 - Present

Member, District of Columbia Developmental Center for AIDS Research (DC D-CFAR), Biostatistics Network, Washington, DC, USA, Appointed. 1/12 - Present

Reviewer, Journal Article, *Statistics in Medicine*. 1/10 – 2/13

Reviewer, Journal Article, Geographical Analysis, Appointed. 1/05-1/07

Committee Member, AMS-ASA-AWM-IMS-MAA-NCTM-SIAM Committee on the Profession, 1/15-present

Committee Member, American Statistical Association's Committee on Minorities in Statistics, Appointed. 1/10- present

Conference Organizer, Conference for African Americans in the Mathematical Sciences, Princeton, NJ, Appointed. Summers 10-present

Reviewer, Journal Article, International Journal of Health Geographics, Appointed. 1/14

Faculty mentor for Calandra Moore, Woodrow Wilson National Fellowship Foundation, Elected. 1/14-present

Jury/Award Selection Committee, Infinite Possibilities Conference, Corvallis, OR, 8/14 – 12/14

Conference Organizer, Blackwell-Tapia Workshop, Los Angeles, CA, Appointed. 1/14-11/14

Reviewer, Grant Proposal, National Science Foundation, Washington, DC, United States, 10/14

Jury/Award Selection Committee, American Mathematical Society, *Selection of Exemplary Program or Achievement in a Mathematics Department Award*, Appointed. 9/14

Judge for poster awards, Conference for African Americans in the Mathematical Sciences, Princeton, NJ. 6/14

Committee Member, American Mathematics Society Special Prize Committee, Appointed. 1/13

Reviewer, Grant Proposal, National Science Foundation, *Mentoring through Critical Transition Points (MCTP) and Unsolicited Workforce (UWP)*. 5/13

Reviewer, Grant Proposal, National Science Foundation, *S-Stem program*, Washington, DC, 3/13

Reviewer, Grant Proposal, National Science Foundation, *Mentoring Through Critical Transition Points (MCTP) and the Workforce Program in the Mathematical Sciences (UWP)*, Washington, DC, 2/13

Board of Advisors for the International Biometrics Society-Eastern North American Region, 1/10-12/13

Poster judge, Society for the Advancement of Native American and Chicanos in Science (SACNAS), Seattle, WA 10/12

Program Organizer, Health-care distributed health services research group, Raleigh, NC, USA, 5/12

Conference organizer, David Blackwell Memorial Conference, Howard University, Washington, DC. 4/12

Reviewer, Journal Article, Journal of the National Medical Association, 2/12

Reviewer, Journal Article, International Journal of Climate, Appointed. (2011)

Elected Representative-at-large for the Caucus of Women in Statistics. 1/06– 1/08

Appointed to regional advisory board, International Biometrics Society-Eastern North American Region (ENAR)

Appointed to the Committee for Minorities in Statistics, American University. 1/11-present

Committee for Minorities in Statistics, Appointment, American Statistical Association. 1/11- present

Professional

Reviewer, Journal Article, *Statistics in Medicine*. 5/10

Reviewer, Textbook, W.H. Freeman & Company, New York, NY. 7/10 – 9/10

Program Organizer, Caucus for Women in Statistics, Washington, DC. 1/09

Reviewer, Grant Proposal, Tapia Scholarship. 6/09

Reviewer, Book, *The Art and Science of Learning from Data* by A. Agresti and C. Franklin. 6/06 – 7/06

Reviewer, Journal Article, *Geographical Analysis*. 5/05– 1/06

Media appearances

Today's Drum, (www.todaysdrum). Featured my research paper titled “Impact of geography on mammography use in California,” 1/10

American University, College of Arts and Sciences, *The Catalyst* magazine. Featured my mammography research in article titled “Mammography research garners national attention,” 12/09

BreastCancer.net., featured my research paper titled “Impact of geography on mammography use in California,” 11/09

Surveillance Research Program Bulletin, National Cancer Institute. Featured in profile on new researchers, 10/07

American University, College of Arts and Sciences, *The Catalyst* magazine. Featured in profile of new faculty, 12/06

University of Maryland, College Park newspaper, *The Outlook* newsletter. Featured on a panel discussion which encouraged students to pursue faculty careers, 10/06

Professional Memberships

Council on Undergraduates on Research. 5/13 - Present

Representative at large, Caucus for Women in Statistics. 5/0505 – 5/09)

Regional Advisory Board, International Biometrics Society-Eastern North American Region. 1/05-12/09

Caucus for Women in Statistics, Representative at large, 1/05 – 1/09.

Regional Advisory Board, International Biometrics Society-Eastern North American Region. 1/05 – Present

Society for Industrial and Applied Mathematics.1/03 – Present

American Statistical Association.1/01 – Present

Institute of Mathematical Statistics.3/01 – Present

Association for Women in Mathematics.1/ 99 - Present

American Mathematical Society. 92 - Present

AWARDS AND HONORS

Morton Bender Prize for outstanding research by an Associate Professor, American University. 5/12

Carvell Brownie Scholar, North Carolina State University. 08/10

Appointed to the Regional Advisory Board, Eastern North American Region of the International Biometrics Society.1/09

Teaching with Research Award (nominated), American University. 10/09

Waller Award for teaching (nominated), American Statistical Association section on Statistical Education. 3/08

Elected Representative-at-large, Caucus for Women in Statistics.12/06

First place graduate student poster award for outstanding theory, Conference for African American Researchers in the Mathematical Sciences. 6/03

Elected student representative to the Graduate Committee for Applied Mathematics and Scientific Computation (GCAMSC), University of Maryland.8/00