Maryclare Griffin

Assistant Professor
University of Massachusetts Amherst
Department of Mathematics and Statistics
1446 Lederle Graduate Research Tower
Amherst, MA 01003

http://maryclare.github.io
maryclaregri@umass.edu

Employment

Department of Mathematics and Statistics 2019-Present
University of Massachusetts Amherst
Assistant Professor

Center for Applied Mathematics 2018-2019
Cornell University
Postdoctoral Associate

Education

University of Washington, Seattle, WA 2013-2018
Ph.D., Statistics
Advisor: Peter Hoff, Thesis Title: "Model-Based Penalized Regression"

Duke University, Durham, NC 2016-2018
Visiting Ph.D. Student

University of Chicago, Chicago, IL 2008-2012
B.A., Economics with Honors, Statistics

Publications

Published

Winn-Nuñez, E. T., Griffin, M., Crawford, L. "A Simple Approach for Local and Global Variable Importance in Nonlinear Regression Models."
Computational Statistics and Data Analysis, forthcoming.

Griffin, M. "Improved Pathwise Coordinate Descent for Power Penalties."
Journal of Computational and Graphical Statistics, forthcoming.

Griffin, M., Hoff, P. D. "Structured Shrinkage Priors."
Journal of Computational and Graphical Statistics, forthcoming.

Gelsinger, M., Griffin, M., Matteson, D. S., Guinness, J. "Log-Gaussian Cox Process Modeling of Large Spatial Lightning Data using Spectral and Laplace Approximations."
Annals of Applied Statistics, forthcoming.

Zhang, W., Griffin, M., Matteson, D. S. "Modeling a Nonlinear Biophysical Trend Followed by Long-Memory Equilibrium with Unknown Change Point."
Annals of Applied Statistics. 17(1):860-880

Griffin, M., Hoff, P. D. (2020) "Testing Sparsity-Inducing Penalties."
Journal of Computational and Graphical Statistics. 29(1):128-139.

Griffin, M., Hoff, P. D. (2019) "Lasso ANOVA Decompositions for Matrix and Tensor Data."
Computational Statistics and Data Analysis. 137:181-194

Griffin, M., Gile K. J., Fredriksen-Goldsen K., Handcock M. S., Erosheva E. A. (2018) "A simulation-based framework for assessing the feasibility of respondent-driven sampling for estimating characteristics in populations of lesbian, gay and bisexual older adults."
Annals of Applied Statistics. 12(4):2252-2278.

Holstein, C., Griffin, M., Hong J., Sampson P. (2015) "A Statistical Method for Determining and Comparing Limits of Detection of Bioassays."
Analytical Chemistry. 87(19):9795-9801.

Preprints

Griffin, M., Samorodnitsky, G., Matteson, D. S. "Likelihood Inference for Possibly Non-Stationary Processes via Adaptive Overdifferencing."
Major revision requested.

Published Software

Griffin, M. `gnorm`: Generalized Normal/Exponential Power Distribution for `R`, version 1.0.0.

Honors and Awards

National Science Foundation Division of Undergraduate Education S-STEM Award (#2130262)	2022-2028
National Science Foundation Division of Mathematical Sciences Statistics Research Award (#2113079)	2021-2024
Institute for Social Science Research (ISSR) Scholar	2021-2022
Mutual Mentoring Team Grant	2020
National Science Foundation Graduate Research Fellowship	2013-2018
Frontiers in Forecasting Best Poster Prize	2018
Women in Statistics and Data Science Conference Travel Award	2016
Survey Research Methods, Government Statistics, and Social Statistics Sections Student Paper Award	2015
University of Washington, Blalock Fellowship	2013
University of Chicago, Goldberg Award in Economics	2012

Teaching Experience

University of Massachusetts Amherst

Instructor for STAT 535: Statistical Computing	F2023
Instructor for STAT 525: Regression Analysis	S2020, F2020, S2021, S2023
Instructor for STATISTC 697TS: Time Series Analysis and Applications	S2020, S2022

Cornell University

Instructor for STSCI4550/ILRST4550/ORIE5550: Applied Time Series Analysis	S2019

University of Washington

Teaching Assistant for CSS&S564: Bayesian Statistics	S2016

Presentations

Invited Talks

Likelihood Inference for Possibly Non-Stationary Processes via Adaptive Overdifferencing.
Booth School of Business, Econometrics and Statistics Colloquium,
University of Chicago, Chicago, IL; October 2021.

Likelihood Inference for Possibly Non-Stationary Processes via Adaptive Overdifferencing.
New England Statistics Symposium, Providence, RI; October 2021.

Bayesian generalized linear models for correlated data with fewer latent variables.
CMStatistics, Virtual; December 2020.

Structured Shrinkage Priors.
Department of Statistical Science,
University College London, Virtual; November 2020.

Estimation of Possibly Non-Stationary Long Memory Processes via Adaptive Overdifferencing.
Paul H. Chook Department of Information Systems and Statistics,
Baruch College, Virtual; October 2020.

Estimation of Possibly Non-Stationary Long Memory Processes via Adaptive Overdifferencing.
Department of Mathematics,
University of Maryland, Virtual; October 2020.

A review of the computational aspects of penalized regression from a model-based perspective.
Department of Mathematics and Statistics, Applied Mathematics and Computation Seminar,
University of Massachusetts Amherst, Amherst, MA; February 2020.

Estimation for possibly non-stationary long memory processes.
Department of Biostatistics and Epidemiology,
University of Massachusetts Amherst, Amherst, MA; January 2020.

Estimation for possibly non-stationary long memory processes.
Computational Social Science Institute,
University of Massachusetts Amherst, Amherst, MA; November 2019.

An Introduction to Model-Based Penalized Regression.
Department of Mathematics and Statistics,
Amherst College, Amherst, MA; November 2019.

Too Many Predictors, Too Few Responses.
Research Bytes @ MassMutual,
Western Mass Statistics and Data Science, Amherst, MA; November 2019.

Structured Shrinkage Priors.
Department of Statistics,
George Mason University, Fairfax, VA; September 2019.

Model-Based Penalized Regression.
Department of Mathematics and Statistics,
University of Massachusetts Amherst, Amherst, MA; December 2018.

Testing Sparsity-Inducing Penalties.
Department of Biostatistics and Computational Biology Departmental Colloquia,
University of Rochester, Rochester, NY; October 2018.

Beyond the Bayesian Lasso: A Review of Continuous Shrinkage Priors.
Joint Statistical Meetings, Vancouver, WA; August 2018.

Invited Panels

Wrapping Up and Moving On: Advice for the Final Stretch of Graduate School.
Women in Statistics and Data Science Conference, Virtual; October 2021.

Navigating the World of Data Science.
Voices of Data Science Conference, Virtual; February 2021.

Using Data to Inform the ASA's Policy on Sexual Misconduct.
International Conference on Health Policy Statistics, San Diego, CA; January 2020.

Contributed/Topic Contributed Talks

Generalized Structured Shrinkage Priors Using Correlated Scales.
Joint Statistical Meetings, Virtual; August 2021.

Structured Shrinkage Priors.
Joint Statistical Meetings, Denver, CO; August 2019.

Long Memory Time Series Methods for the Analysis of Electronic Impedance Sensing Data.
Western North American Region of The International Biometric Society Conference. Portland, OR; June 2019.

Structured Shrinkage Priors.
New England Statistics Symposium, Hartford, CT; May 2019.

Model-Based Testing of Sparsity Inducing Penalties.
Western North American Region of The International Biometric Society Conference. Santa Fe, NM; June 2017.

Using Hierarchical Models to Understand P300-Wave–Based Brain-Computer Interface Performance Among Disabled Adults.
Joint Statistical Meetings, Chicago, IL; August 2016.

Assessing Feasibility of Respondent-Driven Sampling Using Pilot Data with an Application to Older Lesbian, Gay, and Bisexual Adults.
Joint Statistical Meetings, Seattle, WA; August 2015.

Poster Presentations

Testing Sparsity-Inducing Penalties.
21st Meeting of New Researchers in Statistics and Probability.
Fort Collins, CO, August 2019.

Pathwise Coordinate Descent for Power Penalized Regression.
Non-convex Optimization and Deep Learning Workshop.
Boston, MA, January 2019.

Testing Sparsity-Inducing Penalties.
Bridging the Divide, Machine Learning in Medicine Symposium.
Ithaca, NY, September 2018.

Testing Sparsity-Inducing Penalties.
Cornell Day of Statistics.
Ithaca, NY, September 2018.

Testing Sparsity-Inducing Penalties.
Frontiers in Forecasting, Institute for Mathematics and Its Applications.
Minneapolis, MN, February 2018.

Sparse, Structured Matrix Estimation via ℓ_1 Penalization of ANOVA Decomposition.
Opening Workshop of the 2016-2017 Program on Optimization, SAMSI. Research Triangle Park, NC, September 2016.

Service and Affiliations

University of Massachusetts Amherst

Statistics & Probability Seminar Planning Committee	2019-2020, 2021-2022
Statistics Graduate Admissions Committee	2021-2022
Anti-Racism Committee	2021-2022
Visiting Assistant Professor Faculty Search Committee	2020-2021
Five College Statistics Liaison	2020-2021
Climate Committee	2019-2020

Committee of Presidents of Statistical Societies (COPSS)

COPSS Diversity, Equity, and Inclusion (DEI) Task Force	2020-2021

American Statistical Association

ASA Task Force on Sexual Harassment and Assault	2018-2019

University of Washington

StatCom Member	2016-2018
Graduate Student Representative	2014-2015
Graduate and Professional Student Senate Representative	2013-2014

Workshops and Conferences

Invited Session Organizer and Chair, "Modern Solutions to Pressing Problems."
CMStatistics, London, UK (Hybrid); December 2021.

Invited Session Organizer, "Innovations in exact and approximate time series analysis."
New England Statistics Symposium, Providence RI (Hybrid); October 2021.

Invited Session Organizer, "Contemporary Mixed Model Methodology and Applications."
Joint Statistical Meetings, Philadelphia, PA; August 2020.

Invited Session Organizer, "Modern and Practical Solutions to Difficult High Dimensional Regression Problems."
Joint Statistical Meetings, Denver, CO; August 2019.

Invited Session Organizer/Chair, "Cutting Edge Methods for Modern Problems in Statistical Genetics and Genomics"
Western North American Region of The International Biometric Society Conference, Portland, OR; June 2019.

Session Chair, "Modeling."
Joint Statistical Meetings, Vancouver, BC; August 2018.

Session Chair, "Semiparametric Modeling in Biometric Data."
Joint Statistical Meetings, Baltimore, MD; August 2017.

Session Chair, "Model Selection and Sparsity."
Joint Statistical Meetings, Seattle, WA; August 2015.

Reviewer

Annals of Applied Statistics
Biometrika
Biostatistics

Journal of the American Statistical Association, Theory and Methods
Journal of Computational and Graphical Statistics
Journal of Econometrics
Journal of the Royal Statistical Society, Series A
NeuroImage
Observational Studies
Statistica Sinica
Statistics Surveys
NSF 2020, 2021

Associate Editor

Data Science in Science

Member

American Statistical Association
Institute of Mathematical Statistics
Caucus for Women in Statistics
International Biometric Society