Priya Kohli, PhD

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Research Interests

Nonparametric statistics with applications in Social Sciences, Financial, Environmental and Biological Studies, Multivariate longitudinal data, Covariance modeling, Missing data analysis, Time series, Spatial statistics, and RNA-sequencing.

Academic Appointments

President, ASA Connecticut Chapter, August 2019-present.

Associate Professor of Statistics, Department of Mathematics and Statistics, Connecticut College, New London, CT. July 2018 - present.

Assistant Professor of Statistics, Department of Mathematics and Statistics, Connecticut College, New London, CT. July 2012 - June 2018.

Education

Ph.D. Statistics, Texas A&M University, 2012
Dissertation Advisors: Dr. M. Pourahmadi and Dr. W. Chen.
Dissertation Title: *Prediction and Estimation of Random Fields.*

M.S. Applied Probability and Statistics, Northern Illinois University, 2008

M.Sc. Agricultural Statistics, Indian Agricultural Stat Research Institute, 2006
Dissertation Advisors: Dr. R. Srivastava and Dr. R. Parsad.
Dissertation Title: *Supersaturated Designs.*

B.Sc.(Honors) Physics, Delhi University, India, 2003.

Publications

Refereed Publications

1. **Kohli, P.**, Marazzi, L. and Eastman, D. (2020). *Transcriptome analysis of axolotl oropharyngeal explants during taste bud differentiation stage, Mechanisms of Development, 161, March 2020, https://doi.org/10.1016/j.mod.2020.103597.*
2. Marazzi, L., **Kohli, P.** and Eastman, D (2020). *Transcriptome dataset for RNA-seq analysis of axolotl embryonic oropharyngeal endoderm explants, Mechanisms of Development, Data in Brief, in press.*
3. Lòpez-Anuarbe M. and **Kohli P.** (2019). *Understanding Male Caregivers Emotional, Financial, and Physical Burden in the United States, Healthcare, 7(2). E72, https://www.mdpi.com/2227-9032/7/2/72.*
4. **Kohli P.**, Siver P. A., Marsicano L., Hamer J. and Coffin A*. (2017). Assessment of Long-term Trends for Management of Candlewood Lake, Connecticut, USA, *Lake and Reservoir Management*, 33(3), 280-300. Here * denotes an undergraduate student.
5. Harvill J. L., **Kohli P.** and Ravishanker N. (2017). *Clustering nonlinear, nonstationary time series using BSLEX*, *Methodology and Computing in Applied Probability*, 19(3), 935-955.
6. **Kohli P.** (2016). *Fractional Bivariate Exponential Estimator for Long-range Dependent Random Field*, *Spatial Statistics*, **15**, 22-38.

7. **Kohli P.**, Garcia T. P. and Pourahmadi M. (2016). *Modeling the Cholesky factors of covariance matrices of multivariate longitudinal data*, *Journal of Multivariate Analysis*, **145**, 87-100.

8. **Kohli P.** and Pourahmadi M. (2014). *Some prediction problems for stationary random fields with quarter-plane past*, *Journal of Multivariate Analysis*, **127**, 112-125.

9. Garcia T. P., **Kohli P.** and Pourahmadi M. (2012). *Regressograms and mean-covariance models for incomplete longitudinal data*, *The American Statistician*, **66**, 85-91.

10. **Kohli P.** and Pourahmadi M. (2011). *Nonparametric estimation of the innovation variance and judging the fit of ARMA models*, Economic Time Series: Modeling and Seasonality, Eds. Bell W., Holan S. and McElroy T., Chapman & Hall/CRC Press.

11. Gupta S. and **Kohli P.** (2008). *Analysis of supersaturated designs: a review*, *Journal of Indian Society of Agricultural Statistics*, **62**, 156-168.

Patents

12. Srinivasan S. and **Kohli P.** (2014). *System and method for estimation in a multivariate, longitudinal setup*, WO2013126724 A2.

13. Srinivasan S. and **Kohli P.** (2013). *System and method for estimation of missing data in a multivariate, longitudinal setup*, US 20130226613 A1.

Conference Papers

14. Zhang Y., Madiri S., Zhang L. and **Kohli P.** (2010). *Statistical technique to handle data irregularities in field retroreflectivity of pavement markings*, Transportation Research Board 89th Annual Meeting, #10-3217.

Blog (online work with student)

15. Whitney J., **Kohli P.** and Cangelosi J*. (2015). Keep the Talk Going, Dedicated to improving communication about relationships, sexuality, and intimacy, May 2015. Here * denotes an undergraduate student.

Submitted Papers

16. MVR: R Package for Visualizing Dependence Patterns in Multivariate Longitudinal Data.

Working Papers

17. Joint mean-covariance maximum likelihood estimates in multivariate longitudinal data.

18. Comparing impacts of covariance modeling techniques in multivariate longitudinal data analysis.

19. Biclustering with applications in RNA-sequencing.

Honors and Awards

Research Matters Research Grant, Connecticut College, 2017, 2019.

R. F. Johnson Faculty Research Fund in 2013, 2015, 2017-2020.

Susan Eckert Lynch '62 Faculty Research Funds in 2014-15 and 2015-16.

Faculty-Student Engagement Fund 2014, 2017, 2015-2018, 2020.

Center for Teaching and Learning (CTL) Featured Assignment Recognition in Spring 2016.

National Science Foundation (NSF) Travel Award, 24th ICSA/Graybill Joint Conference, Jun '15, Fort Collins, Colorado.

NSF Travel Award, International Conference on Advances in Interdisciplinary Statistics and Combinatorics, Oct '14, Greensboro, NC.

National Institute of Statistical Sciences/American Statistical Association (NISS/ASA) Writing Award for Junior Researchers to support travel to attend NISS/ASA Workshop, Jul '14 (Boston, MA) and Aug '13 (Montreal, Canada).

Young Researcher Award to support travel to attend Dimension Reduction and High Dimensional Inference, University of Florida, Jan '14.

NSF Travel Grant for Junior Faculty, 2013 International Indian Statistical Association (IISA) Conference, Jan '13, Chennai, India.

Carol J. Feltz Memorial Scholarship, Northern Illinois University, 2008.

Council of Scientific and Industrial Research, National Junior Research Fellowship (JRF), All India Rank 5, Indian Council of Agricultural Research, 2003-2006.

Meetings, Presentations, Workshops

Meetings

18th Annual CT Chapter Mini-conference, Yale University, CT, April 22, 2020 (upcoming).

International Conference of Health Policy Statistics (ICHPS), San Diego, CA, Jan. 6-8, 2020.

33 New England Statistics Symposium (NESS), Hartford, CT, May 15-17, 2019.

21st New England Isolated Statisticians Meeting (NEISM), Wellesley College, MA, October 27, 2018.

Women in Statistics and Data Science, Cincinnati, Ohio, Oct 17-20, 2018.

DataFest, Wesleyan University, CT Apl, 2016-18.

Women in Statistics and Data Science, La Jolla, CA, Oct 19-21, 2017.

Connecticut Annual Statisticians Meeting, Bristol, CT, Apl 5, 2017.

21st New England Isolated Statisticians Meeting (NEISM), Stonehill College, MA, Oct 29, 2016.

National Bureau of Economic Research and National Science Foundation (NBER-NSF) Time Series Conference, Columbia University, NY, Sep 16-17, 2016.

Thirteenth Annual ASA CT Chapter Mini-Conference Using Statistical Models for Prediction, University of Connecticut Health Center, Farmington, CT, Apr 5, 2015.

Recent Presentations

Parsimonious Data-Based Methods for Covariance Estimation in Multivariate Longitudinal Data, NESS, Hartford, May 2019.

Dependence pattern visualization using regressograms for univariate and multivariate longitudinal studies with applications in clinical trials, Brown University, March 2019.

Modeling the Cholesky factors of covariances in multivariate longitudinal data, *Aspects of Covariance Estimation*, 2018 IISA Conference, Gainesville, Florida, May 17-20, 2018.

RNA-Sequencing, *Recent Developments in Bioinformatics*, 2017 IISA Conference, Hyderabad, India, Dec 27-20, 2017.

Recent Workshops

Coach for Faculty Success Program, National Center for Faculty Development and Diversity, Jan-Apr 2019.

Participant in Post-tenure Pathfinders Program, National Center for Faculty Development and Diversity, May - Aug 2018.

Participant in Faculty Success Program, National Center for Faculty Development and Diversity, May - Aug 2017.

Participant in Tempel Summer Institute, Connecticut College, June 2016 and June 2017.

Organized and conducted a two-day workshop on introducing R for applications in life sciences, Connecticut College, Jul 2015.

GCAT-SEEKquence workshop, *The Genome Consortium for Active Teaching NextGen Sequencing Group*, Juniata College, PA, Jun '15.

Service

- President, ASA CT Chapter Executive Committee, August 2019-present.
- Vice President ASA CT Chapter Executive Committee, August 2018-2019.
- Elected Member of the Society Council of the New England Statistical Society (NESS), June 2018-present.
- *Association for Women in Mathematics (AWM)* Mentor, August 2015-present.
- *Undergraduate Statistics Project Competition (USPROC)* Judge, summer 2017.
- Peer reviewer for the journals *Computational Statistics and Data Analysis, Electronic Journal of Statistics, Journal of Multivariate Analysis, MAA Book Reviews, Mathematical Reviews, Sankhya, Scandavian Journal of Statistics, Statistica Sinica, Statistica Neerlandica, Statistics and Probability Letters, Stochastic Processes and their Applications, Women's Reproductive Health.*
- Priorities, Planning, and Budget Committee (PPBC), Committee on Faculty Compensation (CFC), Committee on Academic Standing (CAS), and Committee on the Status of Faculty Women (CSFW).
- Core faculty for Data, Information and Society pathway, Connecticut College.
- Core faculty for Public Health Pathway, Connecticut College.
- DataFest Coordinator 2016, 2017, 2018, 2020.
- Women in Math Faculty Coordinator.

Professional Memberships:

- American Statistical Association (ASA)
- Caucus for Women in Statistics (CWS)
- Association for Women in Mathematics (AWM)
- Eastern North American Region/International Biometric Society (ENAR)
- International Indian Statistical Association (IISA)

Statistical Softwares and Scripting Language: R (RStudio), SPSS, SAS, MATLAB, PYTHON