

Ali Arab

Contact Information

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Academic Appointments

Georgetown University, Washington, DC

- Associate Professor of Statistics, August 2014-Present
- Assistant Professor of Statistics, August 2007-July 2014
- Department of Mathematics & Statistics
- Environmental Initiative
- Center for the Environment

Education

University of Missouri, Columbia, Missouri

- Ph.D., Statistics, August 2007
- Advisor: Christopher K. Wikle
- Dissertation Topic: "Hierarchical Bayesian Spatio-Temporal Models for Environmental Processes"

Southern Illinois University, Edwardsville, Illinois

- M.S., Mathematics and Statistics, May 2002
- Advisor: Steven E. Rigdon
- Thesis Topic: "Piecewise Exponential Model for the Reliability of k Repairable Systems"

Iran University of Science and Technology, Tehran, Iran

- B.S., Applied Mathematics and Operations Research, February, 1999

Honors and Awards

- Spatial Statistics: Emerging Patterns (International Conference; Avignon, France, June 2015), Best Poster Award.
- National Science Foundation/American Statistical Association Conference Travel Award (August 2011), Awarded funds: \$2,275.
- University of Missouri Outstanding Ph.D. Dissertation Award (April 2008)

- University of Missouri, Department of Statistics Katti Fund Graduate Student Travel Award (2005-2007; Awarded funds: \$1,500)
- Southern Illinois University, College of Arts and Sciences Certificate of Honor (April 2002)
- Southern Illinois University Outstanding Achievement Recognition Program- Student Leadership (April 2002)

Publications

1. **Upcoming Book** (2021-2022): Arab, A. Modeling Complex Count Data with Applications to Epidemiological and Ecological Studies. CRC Press.
2. **Upcoming Book** (2021): Eltorai, A., Arab, A., Atala, A., and M. M. Siddiqui. Translational Urology: Handbook for Designing and Conducting Translational Research. Elsevier.
3. Arab, A. (In preparation) Spatial and Spatio-Temporal Models for Bird Migration. *WIREs Computational Statistics*.
4. Youngflesh C., Socolar, J., Arab, A., Guralnick R. P. , Hurlbert, A. H. , LaFrance, R., Mayor, S. J., Miller, D. A.W., and M. Tingley. Migratory strategy drives bird sensitivity to spring green-up. Under Review (*Nature Ecology & Evolution*)
5. Neupane, N., Goldbloom-Helzner, A., and A. Arab. A spatio-temporal hierarchical Bayesian model for Lyme disease in Virginia. Under Review (*Ticks and Tick-borne Diseases*).
6. Ebhuoma, O., Gebreslasie, M., and A. Arab. Eco-Environmental Modelling of Malaria Transmission in a Province with Low Malaria Transmission via Bayesian Zero-Inflated Models in INLA. Under Review (*Geospatial Health*).
7. Jay, M., Oleson, J., Charlton, M., and A. Arab. A Bayesian Approach for Estimating Age-Adjusted Rates for Low-Prevalence Diseases over Space and Time. Under Review (*Statistics in Medicine*).
8. Sellers K.F., Arab, A., Melville, S., and F. Cui (2020). A Flexible Univariate Moving Average Time-Series Model for Dispersed Count Data. *Journal of Statistical Distributions and Applications*. In press.
9. Sellers K.F., Peng S.J., and A. Arab (2020). A Flexible Univariate Autoregressive Time-Series Model for Dispersed Count Data. *Journal of Time Series Analysis*, 41: 436-453.
10. Lee E.C., Arab A., Goldlust S.M., Viboud C., Grenfell B.T., and S. Bansal (2018). Deploying digital health data to optimize influenza surveillance at national and local scales. *PLOS Computational Biology*, 14(3), e1006020.

11. Stocking J., Bishop M.A., and A. Arab (2017). Using spatial models to predict piscivorous bird distributions in a subarctic sound during the non-breeding season, *Deep-Sea Research Part II: Topical Studies in Oceanography*, 147, 138-147.
12. Arab A., Hooten M. B. and C. K. Wikle (2017). Hierarchical Spatial Models. In *Encyclopedia of Geographical Information Science, Second Edition*. Editors: Shashi Shekhar, Hui Xiong and Xun Zhou). Springer: New York.
13. Arab A., Courter J. R., and J. Zelt (2016). A Spatio-Temporal Comparison of Avian Migration Phenology Using Citizen Science Data. *Spatial Statistics*, 18.A, 234-245.
14. Zelt J., DeLeon R. L., Arab A., Droege S., Laurent K., and J. W. Snodgrass (2016). Long-term trends in avian migration timing for the state of New York. *The Wilson Journal of Ornithology*. In print.
15. Arab, A. (2016). Spatio-Temporal Trends in Mass Shooting Incidents in the United States, In JSM Proceedings, Social Statistics Section. Alexandria, VA: American Statistical Association.
16. Arab A. (2016). Iran's Lack of Transparency and Accountability and its Underdeveloped Data & Statistics Infrastructure. *Iran Human Rights Review*. Published online.
17. Arab A. (2015). Spatial and Spatio-Temporal Models for Modeling Epidemiological Data with Excess Zeros. *Int. J. Environ. Res. Public Health*, 12, pages 10536-10548.
18. Wildhaber M. L., Yang W.-H. and A. Arab (2015). Population Trends, Bend Use Relative To Available Habitat And Within-River-Bend Habitat Use Of Eight Indicator Species Of Missouri And Lower Kansas River Benthic Fishes: 15 Years After Baseline Assessment. *River Research and Applications*. In Print. DOI: 10.1002/rra.2846
19. Arab A. and J. R. Courter (2015). Spatio-Temporal Trend Analysis of Historic Records of Spring Bird Arrival. *Communications in Statistics: Simulation and Computation*. 44 (10), pages 2535-2547.
20. Zhang Y., Arab A., Cowling B. J., and M. A. Stoto (2014). Characterizing Influenza surveillance systems performance: Application of a Bayesian hierarchical statistical model to Hong Kong surveillance data. *BMC Public Health*. 14(1), 850. doi:10.1186/1471-2458-14-850.
21. Arab, A., Jackson, M. and C. Kongoli (2014). Spatio-Temporal Analysis of Malaria Trends and Weather Effects in Western Africa. *Malaria Journal*.
22. Arab, A. and G. Wimp (2013). Plant Production and Alternate Prey Channels Impact the Abundance of Top Predators. *Oecologia*, Volume 173, Issue 2, pages 331-341.
23. Zelt, J., Courter, J., Arab, A., Johnson R. and S. Droege (2012). Reviving a Legacy Citizen Science Project to Illuminate Shifting Migratory Bird Patterns. *The International Journal*

24. Arab A., Holan S., Wikle C. K. and M. L. Wildhaber (2012). Semiparametric Bivariate Zero-Inflated Poisson Models with Application to Studies of Abundance for Multiple Species. *Environmetrics*. Volume 23, Issue 2, pages 183-196.
25. Arab A., Rigdon S. E. and A. P. Basu (2012). Bayesian Inference for Piecewise Exponential Model for the Reliability of Multiple Repairable Systems. *Journal of Quality Technology*. Volume 44, Issue 1, pages 28-38.
26. Wildhaber M. L., Gladish D. and A. Arab (2012). Distribution and Habitat Use of the Missouri River and Lower Yellowstone River Benthic Fishes from 1996 To 1998: A Baseline for Fish Community Recovery. *River Research and Applications*. Volume 28, Issue 10, pages 1780-1803.
27. Witte C. C., Wildhaber M. L., Arab A. and D. B. Noltie (2009). Substrate Preference of Territorial Male Topeka Shiners (*Notropis topeka*) in the Absence of Sunfish (*Lepomis* sp.). *Ecology of Freshwater Fish*. Volume 18 Issue 3, pages 350-359.
28. Holan S., Wang S., Arab A., Sadler J. and K. Stone (2008). Semiparametric Geographically Weighted Response Curves with Application to Site-Specific Agriculture. *Journal of Agricultural, Biological, and Environmental Statistics*. Volume 13, Issue 4, pages 424-439.
29. Arab A., Wildhaber M. L., Wikle C. K. and C. N. Gentry (2008). Zero-inflated Modeling of Fish Catch Per Unit Area Resulting from Multiple Gears: Application to Channel Catfish and Shovelnose Sturgeon in the Missouri River. *North American Journal of Fisheries Management*. Volume 28, Issue 4, pages 1044-1058.
30. Arab A., Hooten M. B. and C. K. Wikle (2008). Hierarchical Spatial Models. In *Encyclopedia of Geographical Information Science*. Editors: Shashi Shekhar and Hui Xiong. pages 425-431. Springer: New York.

External Grants

- National Science Foundation (MacroSystems Biology): Causes, consequences, and cross-scale linkages of climate-driven phenological mismatch across three trophic levels; Senior personnel on a \$1.65M collaborative grant– Funds for Georgetown (with Leslie Ries): \$330K. (Supplement Award extended in June, 2020: \$65,622)
- National Institute of Health (R01)- Sponsor: National Institute of Diabetes and Digestive and Kidney Diseases: Non-Invasive Evaluation of Transplant Kidney Using OCT (2013-2018); PI: Peter Andrews Georgetown University Medical Center), Ali Arab: Senior personnel on a \$1.68M grant , awarded funds: One month of salary for Summer 2017.
- U.S. Geological Survey: Statistical Modeling of the Missouri River Pallid Sturgeon Monitoring Program: A 3-year subaward to conduct statistical analysis of data obtained from monitoring programs of Pallid Sturgeon in the Missouri River with possibility of renewal of the subaward

contingent on funds availability (Summer 2012- Summer 2014). Awarded funds: \$58,256.

- DC Water Resources Research Institute (DCWRRI) Seed Grant (January 2011), PI: Arash Massoudieh, Co-PI: Tolessa Dekisissa, UDC, Ali Arab (Collaborator), Awarded funds: \$14,983.
- DC Water Resources Research Institute (DCWRRI) Seed Grant (January 2010), PI: Ali Arab, Co-PI: Tolessa Dekisissa, UDC, Awarded funds: \$14,996.
- U.S. Geological Survey: Statistical Modeling of Benthic Fish Species Abundance Data: A 3-year subaward for statistical analysis of data on endangered and imperiled species of fish in the Missouri River (Summer 2008- Summer 2010). Awarded funds: \$49,023.

Internal Grants & Fellowships

- Georgetown University, GEI-MDI Research Pilot Grant Program, Cyber-infrastructure to support environmental research at Georgetown, May 2017, PIs: Leslie Ries, Ali Arab, Lisa Singh, Naresh Neupane, \$30,000.
- Georgetown University Senior Faculty Research Fellowship (Spring 2019): Fellowship provided release from teaching and service for one semester at full pay.
- Georgetown University, Medical Center, Department of Biostatistics, Bioinformatics, and Biomathematics: Flexible Statistical Models for the Analysis of Zero-Inflated Biological Data (February 2012, PIs: George Luta and Ali Arab), Awarded funds: \$3,200 (summer support for 12 weeks, 20 hours per week for a graduate student researcher).
- Georgetown University Environmental Initiative: Partnership with USGS/NABPP (February 2012, PI: Ali Arab). Awarded funds: \$18,000.
- Georgetown University Environmental Initiative: Bivariate Ecological Community Model (February 2012, PIs: Gina Wimp and Ali Arab). Awarded funds: \$11,000.
- Georgetown University Junior Faculty Research Fellowship (Spring 2011): Fellowship provided release from teaching and service for one semester at full pay.
- Georgetown University Spring 2011 Grant-in-Aid Program (March 2011, PI: Ali Arab), Awarded funds: \$1,250.
- Georgetown University Research Infrastructure Grant (2009): Advanced Computing Infrastructure (Co-PIs: Kim Sellers and Mahlet Tadesse), Awarded funds: \$25,000.
- Georgetown University Summer Research Grant: a competitive research grant awarded by the Graduate School (Summer 2008), Awarded funds: \$9,500.

Conference & Seminar Presentations

Presentations at International Conferences

- Joint Statistical Meetings (JSM 2018): Vancouver, Canada, August 2018
- Spatial Statistics: Emerging Patterns, Avignon, France, June 2015.
- European Meeting of Statisticians (EMS 2013), Budapest, Hungary, July 2013 (*Invited Speaker*)
- Joint Meeting of International Young Business and Industrial Statisticians & Young Portuguese Statisticians (yBIS/jSPE 2012): Lisbon, Portugal; July 2012.
- The 58th World Statistics Congress, the International Statistical Institute (ISI 0211): Dublin, Ireland; August 2011.

Invited Presentations

- Joint Statistical Meetings (JSM 2020): Virtual, August 2020
- The 6th IEEE International Conference on Data Science and Advanced Analytics, October 2019
- Virginia Tech University, Department of Computer Science, October 2019
- ISI World Statistics Congress (ISI 2017), Marrakech, Morocco, July 2017
- Joint Statistical Meetings (JSM 2015): Seattle, WA, August 2015
- Joint Statistical Meetings (JSM 2014): Boston, MA, August 2014
- The International Association for Great Lakes Research, Hamilton, Ontario, Canada, May 26-30, 2014
- Millersville University, Department of Earth Sciences, Millersville, PA, March 13, 2014
- American University, Department of Mathematics and Statistics, Washington, DC, January 2014
- University of Missouri, Department of Statistics, September 2013. *Frontiers in Methodological and Applied Statistics: A Celebration of 50 Years*, Columbia, MO, 19-21 September 2013
- Joint Statistical Meetings (JSM 2013): Montreal, Canada; August 2013
- Medstar Health Research Institute, Hyattsville, MD, March 2013
- Colorado State University, Department of Statistics, November 2012
- Clemson University, Department Forestry and Natural Resources, March 2012
- Joint Statistical Meetings (JSM 2011): Miami, FL; August 2011
- Virginia Tech University, Department of Computer Science, April 2011
- American University, Department of Mathematics and Statistics, March 2011
- Joint Statistical Meetings (JSM 2009): Washington, DC; August 2009
- National Institute of Standards and Technology (NIST), Statistical Engineering Division, Gaithersburg, MD, June 2009
- Joint Statistical Meetings (JSM 2008): Denver, CO; August 2008 (*Invited Poster*)
- University of Maryland- Baltimore County, Department of Mathematics and Statistics, November 2008
- University of Maryland-College Park, Department of Mathematics and Statistics, October 2008
- George Washington University, Department of Statistics, September 2008
- American Fisheries Society 137th Annual Meeting, San Francisco, California; September 2007
- Virginia Commonwealth University, Department of Statistical Sciences and Operations Research, Richmond, Virginia, February 2007
- RAND Corporation, Statistics Group, Santa Monica, California, February 2007
- Georgetown University, Department of Mathematics, Washington, D.C., February 2007

Contributed Presentations

- Joint Statistical Meetings (JSM 2018): Denver, CO, August 2019
- Government Advances in Statistical Programming (GASP) workshop (October 24 -25 2018)
- Joint Statistical Meetings (JSM 2018): Vancouver, Canada, August 2018
- Joint Statistical Meetings (JSM 2017): Baltimore, MD, August 2017
- Joint Statistical Meetings (JSM 2016): Chicago, IL, August 2016
- ISBA- George Box Research Workshop at George Washington University; May 2014 (*poster*)
- Georgetown University Medical Center, The 2nd Annual Biomedical Informatics Symposium; October 2013 (*poster*)
- Joint Statistical Meetings (JSM 2012): San Diego, CA; August 2012
- Joint Statistical Meetings (JSM 2010): Vancouver, Canada; August 2010
- The 8th Annual Hawaii International Conference on Statistics, Mathematics and Related Fields: Honolulu, HI; January 2009 (*poster*)
- Joint Statistical Meetings (JSM 2007): Salt Lake City, Utah; 2007
- 32nd Spring Lecture Series, University of Arkansas, Spatial and Spatio-Temporal Statistics; April 2007
- 67th Annual Midwest Fish and Wildlife Conference, Omaha, Nebraska; December 2006
- Joint Statistical Meetings (JSM 2006): Seattle, WA; August 2006
- Joint Statistical Meetings (JSM 2005): Minneapolis, MN; August 2005
- International Biometric Society ENAR: Austin, TX; March 2005
- ASA Environmetrics Conference, Chicago, IL; October 2004

Workshops Attended

- Lyme Innovation Roundtable (December 4, 2018) organized by U.S. Department of Health & Human Services
- Government Advances in Statistical Programming (GASP) workshop (October 24 -25 2018)
- AAAS Program Evaluation Workshop (June, 2013)
- Georgetown University, Teaching, Learning, and Innovation Summer Institute (TLISI) Workshops (2008-2012)
- AAAS Science & Human Rights Coalition Meeting, Washington, DC (2011-2013)
- Info-Metrics Institute, American University, Information and Econometrics of Networks, Washington, DC (March 2012)
- Georgetown University, Faculty Workshop on the Environmental Project Invited by President DeGioia (January 2010)
- Georgetown University, Initiating and Conducting Externally Sponsored Research (January 2010)
- Georgetown University, Environmental Studies Meeting with President DeGioia (July 2009)
- Georgetown University, Effective Classroom Interaction Faculty Workshop (November 2008)
- Georgetown University New Faculty Orientation (Fall 2007)
- SAMSI, Workshop on the NSF program Cyber-enabled and Discovery Initiative, SAMSI, Research Triangle, NC (Fall 2007)
- MD/DC/VA Section NExT workshops (Fall 2007, Spring 2008, Fall 2008)
- National Center for Atmospheric Research (NCAR), Fusing Geophysical Models with Data, Boulder, CO (June 2005)
- National Center for Atmospheric Research (NCAR), Spatio-Temporal Modeling Workshop, Boulder, CO (June 2003)
- University of Missouri, Program for Excellence in Teaching, Columbia, MO (August 2002)

Teaching Experience

Georgetown University

- **MATH-006 Statistics with Exploratory Data Analysis** (Fall 2008; Summer 2009-2010; Spring 2013)–Course no longer offered.
- **MATH-040 Probability and Statistics** (Summer 2014-2018)
- **MATH-140 Introduction to Mathematical Statistics** (Spring 2009)
- **MATH-234 Mathematical Statistics II** (Spring 2008)–Course no longer offered.
- **MATH-240 Applied Statistical Methods I** (Spring 2009; Fall 2009-2012)
- **MATH-345 Applied Time Series Analysis** (Spring 2016-2017, Fall 2017-2020)
- **MATH-405 Applied Time Series Analysis** (Spring 2013, Fall 2013)–Course no longer offered.
- **MATH-503 Mathematical Statistics** (Spring 2010, 2012, 2014, 2018)
- **MATH-645 Time Series Analysis** (Fall 2016-2020)
- **MATH-651 Regression Methods/Generalized Linear Models** (Fall 2007-2014)
- **MATH-701 Statistical Consulting Practicum** (Spring 2008)–Course no longer offered.
- **MATH-301/302 Tutorial (independent study)** (Spring 2008; Fall 2012-2014)
- **MATH-703 Internship** (Spring 2008)
- **OPIM-274 Business Forecasting** (Fall 2018-2020) – Business School
- **OPIM-172 Statistical Models for Business** (Spring 2019) – Business School
- **OPIM-173 Business Statistics** (Spring 2020) – Business School

Other Institutions

University of Missouri

- Introduction to Statistics and Probability: Instructor (Fall 2005 - Spring 2006)
- Statistical Reasoning: Recitation Instructor (Fall 2002)

Southern Illinois University-Edwardsville

- College Algebra: Instructor (Spring 2002)
- Introduction to Statistics and Probability: Teaching Assistant (Summer 2000)
- Multivariable Calculus: Teaching Assistant (Spring 2000 and Fall 2001)

Graduate Advising

Masters Thesis Committees

- Jessica Zelt (Towson University; 2015)

Doctoral Dissertation Committees

- Ying Zhang (Georgetown University; 2013)
- Joshua Touyz (George Washington University; 2015)
- Hossein Moradi Rekabdarkolaee (Virginia Commonwealth University; 2016)
- Elizabeth Lee (Georgetown University; 2017)
- Casey Zipfel (Georgetown University)
- Tyler Rippel (Georgetown University)

Consulting & Professional Experience

- Consultant (*Pro Bono*): Casey Trees (DC based non-profit organization Urban)
- Consultant: Department of Transplant Surgery, Georgetown University Hospital (2009-Present)
- Consultant (*Pro Bono*): U.S. Geological Survey, Beltsville, MD (2010 -2012)
- Consultant: U.S. Geological Survey, Columbia, MO (May 2005 -Present)
- Research Assistant: U.S. Geological Survey, Columbia, MO (May 2005 -July 2007)
- Actuarial Science Intern (paid position): Buck Consultants (May 2001 -August 2002)

Professional Service

Department of Mathematics & Statistics

- Departmental Self-Study (Fall 2012)
- Merit Review Committee (Fall 2012-Spring 2013)
- Graduate Admission Committee (Fall 2009-Spring 2010-Fall 2010)
- Graduate Steering Committee (Spring 2012)
- Curriculum Committee (Fall 2007 -Fall 2011)
- Library Committee (Fall 2007-Spring 2010; Fall 2011-Present)
- Statistics Sub-Committee (Fall 2007 -Present)
- Teaching Merit Review Committee (Spring 2009-Fall 2009)

Georgetown University

- Georgetown College Goldwater Fellowship Committee (Fall 2007)
- Center for the Environment (Fall 2007-Present)
- Executive Faculty Committee (Spring 2009)
- Faculty Meeting on Environmental Research, Invited by President DeGioia (July 2009)
- Advanced Research Computing (Fall 2011-Present)
- G-QUADS (Georgetown Quantitative Analysis and Data Science) (Spring 2013)

National & International Service

- Calibration methodology for changes in survey methods, peer review panelist for Marine Recreational Information Program-National Oceanic and Atmospheric Administration (NOAA) Office of Science and Technology, Center for Independent Experts (CIE) (2017)

- Member of the External Review team for the Department of Mathematics and Statistics, University of San Francisco (2017)
- Member of the Board of Directors of Amnesty International USA (2016-2019)
- Treasurer of the Board of Directors of Amnesty International USA (2018-2019)
- Member of the Advisory Committee for survey sampling design & analysis for an international survey conducted by the American Association for the Advancement of Science (AAAS) Science and Human Rights Coalition (2015-Present)
- Analysis of survey data for a pilot study conducted by the AAAS Science and Human Rights Coalition (2014-2015)
- Member of the Hosting Committee for the 10th Anniversary Conference of the American Association for the Advancement of Science (AAAS) Science and Human Rights Coalition (2019)
- Representative of the American Statistical Association (ASA) to the AAAS Science and Human Rights Coalition (May 15, 2014-Present)
- Organizer and host of a discussion panel on “Repression of Students and Academics in Iran” at Georgetown University (November 16, 2013) jointly with Amnesty International and the Committee of Concerned Scientists; The event highlights the case of Omid Kokabee, a nuclear physicist imprisoned by the Iranian regime due to his refusal to participate in the regime’s nuclear program.
- Expert Witness for the United States Government, Department of Justice (April 2012-Present)

Organizer and Chair of Conference Sessions

- Invited Session Chair (JSM 2017, Baltimore, MD)
- Special Topic Session Organizer (ISI 2017, Marrakech, Morocco)
- Contributed Session Chair: “Space-Time Modeling II” (JSM 2012, San Diego, CA)
- Contributed Session Chair: “Methods for Ecological Data” (JSM 2011, Miami Beach, FL)
- Invited Session Chair: “New Developments for the Analysis of Spatial and Temporal Systems in Ecology” (JSM 2009, Washington, DC)
- Invited Session Organizer: “Model Specification and Uncertainty in Ecological Analyses” (ENAR 09, March 15-18, 2009, San Antonio, TX)

Other

- ASA’s Transportation Statistics Interest Group-Member (2011-Present)
- ASA’s Section on Statistics & the Environment (ENVR)-Member (2006-Present)
- ASA’s Committee on Scientific Freedom and Human Rights- Friend (2012-Present)
- AAAS Science and Human Rights Coalition Membership & Outreach Committee-Member (2012-Present)
- AAAS Science and Human Rights Coalition Membership & Outreach Committee-Co-Chair (2013-Present)
- AAAS Science and Human Rights Coalition Service to the Human Rights Community Committee-Member (2011-Present)
- *Pro-Bono* statistical consulting for Casey Trees, and the USGS (October 2010-Present)
- Undergraduate Studies Committee, University of Missouri, Statistics Department (2004 -2007)
- Website Committee, University of Missouri, Statistics Department (2004 -2005)

Professional Organizations & Associations

- American Association for the Advancement of Science (AAAS) Science and Human Rights Coalition (2011-Present)

- Washington D.C. ASA Chapter- Washington Statistical Society (Since 2008)
- American Statistical Association Section on Environment (ENVR), member (Since 2006)
- American Statistical Association (ASA), member (Since 2003)
- Institute of Mathematical Statistics (IMS), member (Since 2004)
- University of Missouri, Statistics Graduate Students Association (SGSA), member (2002 -2007)
- University of Missouri, Statistics Graduate Students Association, Secretary (2003 -2004)
- American Mathematical Society, member (2000-2002)

Referee Experience

- Applications and Applied Mathematics: An International Journal (AAM)
- Biological Conservation
- Chapman & Hall/CRC (Book proposal review)
- College Mathematics Journal
- Environmental and Ecological Statistics (EES)
- Environmetrics
- Ecological Applications (Subject-Matter Editor)
- Ecological Modelling
- Ecological Monographs
- Geoderma
- IEEE Transactions on Reliability
- Journal of Animal Ecology
- Journal of the American Statistical Association (JASA)-Applications and Case Studies
- Journal of Agricultural, Biological, and Environmental Statistics (JABES)
- Proceedings of the Royal Society-Proceedings A
- Pearson Education (Textbook review: Statistics)
- Pearson Education (Textbook review: Stats, Data and Models)
- Served as reviewer for the Internal Review process required by the USGS (one research paper, and two abstracts)
- Spatial Statistics
- Springer (Book chapter review)
- Stochastic Environmental Research & Risk Assessment (SERRA)
- The 32nd Int'l Conference on Information Technology Interfaces (Reviewer; June 2010, Croatia)
- WIREs Computational Statistics
- W.H. Freeman (Textbook review: Introduction to the Practice of Statistics)

Editor Experience

- Subject Matter Editor for Ecological Applications (2014)
- Editorial Board for International Journal of Environmental Research and Public Health-Topical Collection "Methodological Innovations and Reflections" (December 2017-Present)
- Editorial Board for Frontiers in Ecology and Evolution special issue on Advances in Statistical Ecology (2019-Present)

In the News

- Interviewed by AAAS Science and Human Rights Coalition "Responding to COVID-19: Science and Human Rights" Spring 2020. ([AAAS Youtube Channel](#))

- Podcast on “Migration and Resilience to Climate Change” for Georgetown University’s Designing the Future(s) Initiative Core Pathways program, Spring 2018.
- [“Climate Change and Human Rights”](#), September 12, 2016, An invited blog entry for GU Global Futures Initiative for Environment.
- “Has a New Era of Academic Warfare Arrived?” by Ali Arab and Jeffery Toney. *Huffington Post*, June 12, 2013. The article discusses the impacts of academic sanctions and boycotts. In particular, the authors examine the adverse effects of boycotts of Israeli scientists and scholars, as well as the indirect impacts of sanctions on Iranian scholars and students. The authors discuss the academic boycotts and sanctions in light of the principles of science and human rights as described in the Article 15 of the International Covenant on Economic, Social and Cultural Rights (ICESCR).
- Report on ASA-AAAS focus group on human rights and statistics. *Amstat News*, November 2012 issue. To Appear.
- “Are U.S. Iranian Sanctions Self-Defeating?” by Natasha Bahrami, Ali Arab, and Jeffery Toney. *Huffington Post*, July 26, 2012. The article discusses the negative by-products of the economic sanctions of Iran on information exchange and scientific activities.
- Interviewed by the Associated Press on the probabilities related to winning the MegaMillion lottery; Broadcasted by the National Public Radio (NPR). March 30, 2012.
- Featured in “Meet ENVR Members” American Statistical Association’s Section on Statistics & the Environment (ENVR) Newsletter, Summer 2012.
- Research profile featured in “Modeling the Environment” *Georgetown College Newsletter*, March 1, 2012.

Computer Skills

- Statistical softwares and programming: MATLAB, R/S-plus, WinBUGS & OpenBUGS, SAS, STATA, SPSS Minitab, FORTRAN, C++.
- Platforms: Unix/Linux, Mac OS and Windows.

(Updated: November, 2020)