

October 2020

**YULIA R. GEL**

**CONTACT INFORMATION:**

Department of Mathematical Sciences    Phone: +1 (972) 883-6447  
University of Texas at Dallas            Email: [ygl@utdallas.edu](mailto:ygl@utdallas.edu)  
Richardson, TX 75080 USA                Web: <http://www.utdallas.edu/~yxg142030>

**EDUCATION:**

1997–2000    PhD in Applied Mathematics  
                  Saint Petersburg State University, Russia

1992–1997    MSc (*summa cum laude*) Mathematics,  
                  Saint Petersburg State University, Russia

**EMPLOYMENT:**

**Principal Employment**

09/2015 – present    Professor, Department of Mathematical Sciences,  
                          University of Texas at Dallas, USA

01/2014 – present    Adjunct Professor, Department of Statistics and  
                          Actuarial Sciences, University of Waterloo, Canada

01/2014 – 08/2015    Associate Professor (with tenure), Department of Mathematical Sciences,  
                          University of Texas at Dallas, USA

07/2009 – 12/2013    Associate Professor (with tenure), Department of Statistics and  
                          Actuarial Sciences, University of Waterloo, Canada

09/2004 – 06/2009    Assistant Professor, Department of Statistics  
                          and Actuarial Sciences, University of Waterloo, Canada

10/2001 – 08/2003    Postdoctoral Research Associate, Department of Statistics,  
                          University of Washington, USA

## Visiting Positions

- 07/2020 – now Visiting Researcher, DOE Berkeley Lab,  
University of California, Berkeley, USA
- 06/2016 – 06/2017 Visiting Researcher, NASA Jet Propulsion Lab,  
California Institute of Technology, USA
- 07/2016 – 12/2016 Visiting Scholar, the Isaac Newton Institute  
for Mathematical Sciences, Cambridge University, UK
- 09/2011 – 08/2013 Visiting Associate Professor, Department of Applied Mathematics  
and Statistics, Johns Hopkins University, USA  
(on leave from Waterloo 09/2011-03/2012 and 12/2012-08/2013)
- 01/2009 – 06/2009 Visiting Assistant Professor, Department of Statistics,  
University of California, Berkeley, USA (on leave from Waterloo)
- 09/2003 – 08/2004 Visiting Assistant Professor, Department of Statistics,  
George Washington University, USA

## RESEARCH INTERESTS

Statistical foundations of data science, blockchain data analytics, graph mining, inference for complex networks, time series analysis, spatio-temporal processes, nonparametrics, bootstrap and resampling, high-dimensional methods. Applications in power systems, environmental sciences, biosurveillance, finance and business predictive analytics.

## SELECTED PROFESSIONAL RECOGNITION AND HONORS:

- 2018 The American Statistical Association (ASA) Statistics and the Environment Distinguished Achievement Medal
- 2018 Paper *Can We Climate Proof Our Insurance?* is selected for the “Showcases of the Environmetrics Journal” session at the 2018 Annual TIES Meeting, Guanajuato, Mexico
- 2014 Fellow of the American Statistical Association (ASA) Citation: “*for pioneering research on regularization of weakly dependent processes, innovative approaches for analyzing spatio-temporal data, promoting the introduction of modern statistical methodologies in law, public policy, and the environmental sciences, championing the equality of women and other underrepresented groups in the mathematical and physical sciences*”.
- 2014 The International Environmetrics Society (TIES) Abdel El-Shaarawi Young Researcher’s Award Citation: “*for sustained and significant methodological contributions around high dimensional inference for temporal and spatial processes, robust nonparametric resampling approaches, for strong impact in areas such as climate change, hydrology, ecology and epidemiology, and for an outstanding professional contribution and outreach*”.
- 2012 The Robert Harding Humanities and Social Sciences Award, U. of Waterloo, Canada
- 2004 JASA Applications and Case Studies Invited Paper of the Year

**EXTERNAL FUNDED RESEARCH:**

- 2020–2021 "Rapid Response and Novel Research in Earth Science: Forecasting COVID-19 progression and the next hotspot: Do weather conditions and air quality impact COVID-19 transmission rates and clinical severity? "  
NASA 20-RRNES20-0021  
Role: PI; joint with M. J. Garay, K. M. Gorski, H. Lee, NASA JPL
- 2020–2021 "RAPID: Collaborative Research: Operational COVID-19 Forecasting with Multi-Source Information"  
NSF DMS 2027793  
Role: PI; joint with G. Bobashev, RTI
- 2019–2022 "ATD: Topological Data Analysis for Threat Detection"  
NSF DMS 1925346  
Role: PI; joint with M. Kantarcioglu, UTD
- 2020–2021 "Topological Data Analysis of Aerosol Optical Depth Observations"  
NASA Innovative Spontaneous Concepts (ISC)  
Role: PI; joint with H. Lee and K. M. Gorski, NASA JPL
- 2018–2021 "EAGER : Collaborative Research: Local Topological Properties of Power Flow Networks, and Their Role in Power System Functionality"  
NSF ECCS 1824716/1824710  
Role: PI; joint with H. V. Poor, Princeton
- 2019–2021 "Surveillance and Prediction of Emerging Infectious Diseases via Modern Statistical Approaches on Multi-Source Information"  
ConTex. Support for postdoc I. Segovia  
Role: PI
- 2019–2020 "Multiple Peril Maps and Uncertainty Quantification for Climate Induced Risks in Agricultural Insurance with Deep Learning and Climate Model Ensembles"  
Casualty Actuarial Society (CAS)  
Role: PI; co-PI: V. Lyubchich, UMCES and N. Newlands, Government of Canada
- 2018–2021 "AMPS PIs Workshops", NSF DMS 1841312  
Role: PI
- 2017–2020 "AMPS: Collaborative Research: Analysis of Local Power Grid Properties: from Network Motifs to Tensors"  
NSF DMS 1736368/1736417  
Role: PI; joint with H. V. Poor, Princeton

- 2016–2020 "BIGDATA: IA: Collaborative Research: Novel Bootstrap Procedures for Efficient Large Social Network Analysis"  
NSF IIS 1633331/1633355  
Role: PI; joint with M. Kantarcioglu, UTD & V. Lyubchich, UMCES
- 2016–2020 "Nonparametric Inference for Random Networks and Graphs"  
429457 Simons Foundation (declined the portion of 2017-2021)  
Role: PI.
- 2016–2017 "Modeling the Impact of Climate Change on Agricultural Insurance Risks Using Modern Deep Machine Learning Algorithms"  
Society of Actuaries (SOA)  
Role: PI; co-PI: V. Lyubchich, UMCES
- 2015–2018 "EDT: Team Training Mathematical Scientists Through Industrial Collaborations"  
NSF DMS 1514808  
Role: co-PI; PI: S. Minkoff, UTD
- 2016 Conference: The VI Int. Workshop on the Perspectives on High-Dimensional Data Analysis, May 25-27, 2016, Toronto, Canada  
NSF via the Fields Institute, Canada  
Role: PI; joint with E. Ahmed, Brock University.
- 2015 Conference: The 25th Silver Anniversary Meeting of The International Environmetrics Society (TIES) November 21-25, 2015  
NSF CBET 1550435  
Role: PI.
- 2015–2016 "Developing Adaptive Climate Indices"  
Casualty Actuarial Society (CAS)  
Role: PI; co-PI: V. Lyubchich, UMCES.
- 2014–2019 "Modeling Evolution of Digital Social Networks"  
The Social Sciences and Humanities Research Council of Canada (SSHRC)  
Role: PI; co-PI: M. Thompson, Waterloo.
- 2013–2018 "On random network inference using bootstrap"  
The National Science and Engineering Research Council of Canada (NSERC)  
Role: sole PI.

- 2013–2014 "Statistical Analysis for the Climate Change Adaptation",  
subcontract from the Intact Foundation, Canada  
Role: sole PI.
- 2013–2014 "Business Customer Intelligence Data Analytics",  
MITACS Accelerate with Temenos Software. Support for postdoc.  
Role: PI; co-PI: M. Thompson, Waterloo.
- 2013–2014 "Modeling Evolution of Digital Social Networks",  
The 4A grant from the Social Sciences and Humanities Research Council of Canada  
Role: PI; co-PI: P. Carrington and M. Thompson, Waterloo.
- 2012–2013 "Business Customer Intelligence Data Mining",  
MITACS Accelerate with Temenos Software. Support for postdoc.  
Role: sole PI.
- 2009–2011 "Influenza Outbreak Modeling using Random Networks",  
GeoConnections Foundation.  
Role: co-PI; PI: M. McPherson, InfoNaut
- 2009–2011 "Influenza Outbreak Modeling using Random Networks",  
MITACS Accelerate with InfoNaut. Support for postdoc.  
Role: PI; co-PI: M. Thompson, Waterloo.
- 2009–2011 "Bootstrap Prediction for High Frequency Data",  
MITACS Accelerate with TD Securities. Support for PhD student.  
Role: sole PI.
- 2008–2013 "Regularization in time series",  
The Natural Science and Engineering Research Council of Canada (NSERC)  
Role: sole PI.
- 2008–2009 "Probabilistic Mesoscale Weather Forecasting",  
The Shared Hierarchical Academic Research Computing Network.  
Support for PhD student.  
Role: sole PI.
- 2005–2010 "Infrastructure Grant for Mathematical Excellence",  
Canada Foundation for Innovation (CFI).  
Role: co-PI; PI: K. Hare, Waterloo.
- 2005–2010 "Infrastructure Grant for Mathematical Excellence",  
Ontario Research Fund (matching funds)  
Role: co-PI; PI: K. Hare, Waterloo.
- 2005–2008 "Modeling of uncertainties in mesoscale weather prediction",  
The Natural Science and Engineering Research Council of Canada (NSERC)  
Role: sole PI.

## TRAVEL AWARDS

- 2014 Travel Award – Association for Women in Mathematics (AWM) and National Science Foundation (NSF). To attend the Institute of Mathematical Statistics (IMS) Annual Meeting, Sydney, Australia
- 2008 Travel Award – Social Sciences and Humanities Research Council (SSHRC) of Canada To attend the 7th International Conference on Forensic Inference and Statistics, Switzerland
- 2007 Travel Award – Social Sciences and Humanities Research Council (SSHRC) of Canada To attend the 56th Session of the International Statistical Institute (ISI), Portugal
- 2004 Travel Award – Association for Women in Mathematics (AWM) and National Science Foundation (NSF) To attend the Joint Statistical Meeting (JSM), Canada
- 2003 Travel Award – National Science Foundation (NSF) To attend the ISI international conference on Environmental Statistics and Health, Spain

## PUBLICATIONS

(\* denotes student or postdoctoral trainee; <sup>c</sup> denotes corresponding author)

### Books

- B.1 Lyubchich, V., Gel, Y.R., Miller, T., Newlands, N., Kilbourne, K.H., and Smith, A. Eds. (2020). Quantitative Approaches to Evaluating Climate Change Impacts in Socio-Environmental Systems, Public Health, and Insurance. Chapman and Hall/CRC Statistics Press.
- B.2 Golbeck, A.L, Olkin, I. and Gel, Y.R. Eds. (2016). Leadership and Women in Statistics. Chapman and Hall/CRC Statistics Press.

### Journal Articles

- J.1 Ofori-Boateng\*, D., Cribben, I., Gel, Y.R. (2020). Nonparametric Anomaly Detection in Time Series of Graphs. To appear in *The Journal of Computational and Graphical Statistics*.
- J.2 Iliev, I., Huang\*, X., Gel, Y.R. (2020). Speaking out or speaking in? Changes in political rhetoric over time. *Significance*, 17(5), 22–25, doi.org/10.1111/1740-9713.01445.
- J.3 Zambom, A., Gel, Y.R. (2020). Testing for Local Covariate Trend Effects in Volatility Models. *Electronic Journal of Statistics*, 2, 2529–2550.
- J.4 Dey\*, A. K., Akcora\*, C., Gel<sup>c</sup>, Y.R., Kantarcioglu, M. (2020). On the Role of Local Blockchain Network Features in Cryptocurrency Price Formation. To appear in *Canadian Journal of Statistics*, doi.org/10.1002/cjs.11547.

- J.5 Soliman\*, M., Lyubchich, V., Gel<sup>c</sup>, Y.R. (2020). Ensemble Forecasting of the Zika Space-Time Spread with Topological Data Analysis. To appear in *Environmetrics*.
- J.6 Appice, A., Gel, Y.R., Iliev, I., Lyubchich, V. and Malerba, D. (2020) A Multi-Stage Machine Learning Approach to Predict Dengue Incidence: A Case Study in Mexico. *IEEE Access*, 8(1), 2169–3536
- J.7 Islambekov\*, U. D., Yuvaraj\*, M., Gel<sup>c</sup>, Y.R. (2020) Harnessing the Power of Topological Data Analysis to Detect Change Points. *Environmetrics*, 31(1).
- J.8 Li, B., Ofori-Boateng\*, D., Gel, Y.R., Zhang, J. (2020). A Hybrid Approach for Transmission Grid Resilience Assessment Using Reliability Metrics and Power System Local Network Topology. To appear in *Sustainable and Resilient Infrastructure*, 1–16, doi: 10.1080/23789689.2019.1708182.
- J.9 Akcora\*, C., Gel, Y.R., Kantarcioglu, M., Lyubchich, V., Thuraisingham, B. (2019). GraphBoot: Quantifying Uncertainty in Node Feature Learning on Large Networks. To appear in *IEEE Transact. on Knowledge and Data Engineering*, doi: 10.1109/TKDE.2019.2925355.
- J.10 Soliman\*, M., Lyubchich, V., Gel<sup>c</sup>, Y.R. (2019). Complementing the Power of Deep Learning with Statistical Model Fusion: Probabilistic Forecasting of Influenza in Dallas County, Texas, USA. *Epidemics*, 28:100345, doi: 10.1016/j.epidem.2019.05.004. 2019 Best Paper Award from the ASA Government Statistics Section (GSS), Survey Research Methods Section (SRMS), and Social Statistics Section (SSS).
- J.11 Dey\*, A., Gel, Y.R., Poor, H. V. (2019). What Network Motifs Tell Us about Robustness and Reliability of Complex Networks. *Proceedings of the National Academy of Sciences (PNAS)*, www.pnas.org/cgi/doi/10.1073/pnas.1819529116. 2019 Best Paper Award from the ASA Section on Statistics in Defense and National Security (SDNS).
- J.12 Iliev, I., Huang\*, X., Gel, Y.R. (2019). Tracing Political Rhetoric in the Polarized U.S. Congress: Are Our Legislators That Different? *Journal of Royal Statistical Society, Series A*, 182(2), 583–604.
- J.13 Dixon, M., Akcora, C., Gel, Y.R. Kantarcioglu, M. (2019). Blockchain Analytics for Intraday Financial Risk Modeling. *Digital Finance*, 1, 67–89.
- J.14 Ghahari\*, A., Newlands, N., Lyubchich, V., Gel<sup>c</sup>, Y.R. (2019). Deep Learning at the Interface of Agricultural Insurance Risk and Spatio-Temporal Uncertainty in Weather Extremes. *North American Actuarial Journal*, 23 (4), 535-550.
- J.15 Lyubchich, V., Ghahari\*, A., Newlands, N., Mahdi, T., Gel<sup>c</sup>, Y.R. (2019). Insurance Risk Assessment in the Face of Climate Change: Integrating Data Science and Statistics. *WIREs Computational Statistics*, 11(4), e1462. The top 10 accessed articles from WIREs Computational Statistics in 2019.
- J.16 Islambekov\*, U.D., Gel<sup>c</sup>, Y.R. (2019). Unsupervised Space-Time Clustering using Persistent Homology. *Environmetrics*, 30(4), e2539.

- J.17 Tian\*, Y., Gel<sup>c</sup>, Y.R. (2019). Fusing Data Depth with Complex Networks: Community Detection with Prior Information. *Computational Statistics and Data Analysis*, 139, 99–116.
- J.18 Lyubchich, V., Kilbourne, K.H., Gel<sup>c</sup>, Y.R. (2019). Where the Home Insurance Meets the Climate Change: Making Sense of Climate Risk, Data Uncertainty and Projections. *Variance Journal*, 12 (2), 278–292.
- J.19 Chen\*, Y., Gel<sup>c</sup>, Y.R., Lyubchich, V., Nezafati\*, K. (2018). Snowboot: Bootstrap Methods for Network Inference. *R Journal*, 10(2), 95–113.
- J.20 Akcora\*, C., Dixon, M., Gel, Y.R., Kantarcioglu, M. (2018) Blockchain Data Analytics. *IEEE Intelligent Informatics Bulletin*, 19(2), 4–9.
- J.21 Akcora\*, C., Dixon, M., Gel, Y.R., Kantarcioglu, M.(2018) Bitcoin Risk Modeling with Blockchain Graphs. *Economics Letters*, 173, 138–142.
- J.22 Huang\*, X., Iliev, I., Lyubchich, V., Gel<sup>c</sup>, Y.R. (2018). Riding Down the Bay: Space-Time Clustering of Ecological Trends. *Environmetrics*, 29 (5-6), e2455.
- J.23 Gel<sup>c</sup>, Y.R., Lyubchich, V., Ramirez Ramirez, L.L. (2017). Bootstrap Quantification of Estimation Uncertainties in Network Degree Distributions. *Nature Scientific Reports*, 7, 5807.
- J.24 Xu\*, Q., Gel, Y.R., Ramirez Ramirez, L.L., Nezafati\*, K., Zhang, Q.P., Kwok-Leung, T. (2017). Is Google Search Query Useful for Forecasting Influenza in Hong Kong? *PLOS One*, 12(5), e0176690.
- J.25 Lyubchich, V., Gel<sup>c</sup>, Y.R. Can We Climate Proof Our Insurance? (2017). *Environmetrics*, 28(2), 30–39. Highlight of the *Environmetrics Journal* at the 2018 Annual TIES Conference.
- J.26 Golbeck, A., Ramirez Ramirez, L.L., Gel<sup>c</sup>, Y.R. (2017). Women in Statistics. *Wiley StatsRef Statistics Reference Online*, DOI: 10.1002/9781118445112.stat07915.
- J.27 Lyubchich, V., Gel<sup>c</sup>, Y.R. (2016). A Local Factor Nonparametric Test for Trend Synchronism in Multiple Time Series. *Journal of Multivariate Analysis*, 150, 91–104.
- J.28 Lyubchich, V., Wang\*, X., Heyes, A. and Gel, Y.R. (2016). A Data-Driven  $m$ -out-of- $n$  Bootstrap Approach to Testing Symmetry about an Unknown Median. *Computational Statistics and Data Analysis*, 104, 1–9.
- J.29 Grantham\*, A., Gel, Y.R., Boland, J. (2016) Nonparametric Short-Term Probabilistic Forecasting for Solar Radiation. *Solar Energy*, 133, 465–475.
- J.30 Thompson, M.E., Ramirez Ramirez, L.L., Lyubchich\*, V., Gel<sup>c</sup>, Y.R. (2016). Using Bootstrap for Statistical Inference on Random Graphs. *Canadian Journal of Statistics*, 44(1), 3–24.
- J.31 Gray, B.R., Lyubchich\*, V., Gel, Y.R., Rogala, J.T., Robertson, D.M., and Wei, X. (2016). Estimation of River and Stream Temperature Trends under Haphazard Sampling. *Statistical Methods and Applications*, 25(1), 89–105.



- J.32 Golbeck, A.L., Ash, A., Gray, M., Gumpertz, M., Jewell, J.P., Kettenring, J., Singer, J.D. Gel, Y.R. (2016). A Conversation About Implicit Bias. *Statistical Journal of the International Association for Official Statistics*, 32(4), 739–755.
- J.33 Gel<sup>c</sup>, Y.R. and Palma, W. (2015). Discussion of “High-dimensional Autocovariance Matrices and Optimal Linear Prediction” by T.L. McMurry and D.N. Politis. *Electronic Journal of Statistics*, 9(1), 797–800.
- J.34 Jalalpour\*, M., Gel, Y.R., Levin, S.R. (2015). Forecasting Demand for Health Services: Development of a Publicly Available Toolbox. *Operations Research for Health Care*, 5, 1–9. Runner-Up for the Award by The International Society for Disease Surveillance (ISDS) Research Committee, 2015.
- J.35 Kang\* K.-K., Duguay, C.R., Lemmetyinen, J. and Gel, Y.R. (2014). Estimation of Ice Thickness on Large Northern Lakes from AMSR-E Brightness Temperature Measurements. *Remote Sensing of Environment*, 150, 1–19.
- J.36 Jedynak, B., Liu\*, B., Lang\*, A., Gel, Y.R., and Prince, J. (2014). A Computational Method for Computing an Alzheimer’s Disease Progression Score; Experiments and Validation with the ADNI Dataset. *Neurobiology of Aging*, 10.1016/j.neurobiolaging.2014.03.043
- J.37 Gel<sup>c</sup>, Y.R., O’Hara-Hines, J., Chen\*, H., Noguchi\*, K., and Schoner, V. (2014). Developing and Assessing E-Learning Techniques for Teaching Forecasting. *Journal of Education for Business*, 89(5), 215–221.
- J.38 Gel, Y.R. (2013). Functional Ridge Regularization. *Oberwolfach Reports*, 48, 2766–2769.
- J.39 Lyubchich\*, V., Gel, Y.R., El-Shaarawi, A. (2013). On Detecting Non-Monotonic Trends in Environmental Time Series: a Fusion of Local Regression and Bootstrap. *Environmetrics*, 24(4), 209–226.
- J.40 Dugas, A.F., Jalalpour\*, M., Gel, Y.R., Levin, S.R., Torcaso, F., Igusa, T., and Rothman, R. (2013). Influenza Forecasting with Google Flu Trends. *PLOS One*, 8(2), e56176.
- J.41 Luus\*, K.A., Gel, Y.R., Kelly, R.E.J., Duguay, C.R. and Lin, J.C. (2013). Pan-Arctic Linkages between Snow Accumulation and Growing Season Air Temperature, Soil Moisture & Vegetation. *Biogeosciences*, 10, 7575–7597. The article is one of the most commented papers in *Biogeosciences* for year 2013.
- J.42 Ramirez Ramirez\*, L.L., Gel<sup>c</sup>, Y.R., Thompson, M., de Villa, E., and McPherson, M. (2013). A new Surveillance and Spatio-Temporal Visualization Tool SIMID: SIMulation of Infectious Diseases using Random Networks and GIS. *Computer Models and Programs in Biomedicine*, 110(3), 455–470.
- J.43 Gel<sup>c</sup>, Y.R. and Chen\*, B. (2012). Robust Lagrange Multiplier Test for Detecting ARCH/GARCH Effect Using Permutation and Bootstrap. *Canadian Journal of Statistics*, 40(3), 405–426.
- J.44 Noguchi\*, K., Gel<sup>c</sup>, Y.R., Konietzschke, F., and Brunner, E. (2012). nparLD: An R Software Package for the Nonparametric Analysis of Longitudinal Data in Factorial Experiments. *Journal of Statistical Software*, 50(12), 1–23.

- J.45 Bickel P. and Gel<sup>c</sup>, Y.R. (2011). Banded Regularization of Covariance Matrices in Application to Parameter Estimation and Forecasting of Time Series. *Journal of the Royal Statistical Society, Series B*, 73(5), 711–728.
- J.46 Noguchi\* K., Gel<sup>c</sup>, Y.R. and Duguay, C.R. (2011). Bootstrap-Based Tests for Trends in Hydrological Time Series, with Application to Ice Phenology Data. *Journal of Hydrology*, 410, 150–161.
- J.47 Chen\* B. and Gel<sup>c</sup>, Y.R. (2011). A Sieve Bootstrap Two-Sample  $t$ -test under Serial Correlation *Journal of the Biopharmaceutical Statistics*, 21(6), 1100–1112.
- J.48 Chen\* B., Gel, Y., Balakrishna, N. and Abraham, B. (2011). Computationally Efficient Bootstrap Prediction Intervals for Returns and Volatilities in ARCH and GARCH Processes. *Journal of Forecasting*, 30(1), 51–71.
- J.49 Chen\* B. and Gel<sup>c</sup>, Y.R. (2011) Regularized Autoregressive Multiple Frequency Estimation. Invited paper for the Silver 25th Jubilee of the *Journal of the Iranian Statistical Society*, 10(2), 141–166.
- J.50 Chen\* B. and Gel<sup>c</sup>, Y.R. (2010). Detecting Hidden Periodicities by Regularized Least Squares. *Journal of Multivariate Analysis*, 101(7), 1712–1727.
- J.51 Noguchi\* K. and Gel<sup>c</sup>, Y. (2010). Combination of Levene-type Tests and a Finite-Intersection Method for Testing Equality of Variances against Ordered Alternatives. *Journal of Non-parametric Statistics*, 22(7), 897–913.
- J.52 Gel, Y.R. (2010). Test of fit for a Laplace Distribution against Heavier Tailed Alternatives. *Computational Statistics and Data Analysis*, 54, 958–965.
- J.53 Gastwirth, J.L., Gel, Y.R. and Miao, W. (2009). The Impact of Levene’s Test of Equality of Variances on Statistical Theory and Practice. *Statistical Science*, 24(3), 343–360.
- J.54 Gel<sup>c</sup> Y.R., Miao, W., and Gastwirth, J.L. (2009). The effect of Dependence between Observations on the Proper Interpretation of Statistical Evidence. *Law, Probability and Risk*, 8(1), 25–38.
- J.55 Hui\*, W., Gel<sup>c</sup>, Y.R., and Gastwirth, J.L. (2008). Lawstat: an R Package for Law, Public Policy and Biostatistics. *Journal of Statistical Software*, 28(3), 1–26.
- J.56 Gel<sup>c</sup>, Y.R., Gastwirth, J.L. (2008). The Robust Jarque-Bera Test of Normality. *Economics Letters*, 99(1), 30–32.
- J.57 Gel, Y.R. (2007). Comparative Analysis of the Locally Observation Based (LOB) Method and the Non-Parametric Regression Based Method for Gridded Bias Correction in Mesoscale Weather Forecasting. *Weather and Forecasting*, 22(6), 1243–1256.
- J.58 Gel<sup>c</sup>, Y.R., Miao, W., and Gastwirth, J.L. (2007). Robust Directed Tests of Normality Against Heavy Tailed Alternatives. *Computational Statistics and Data Analysis*, 51, 2734–2746.

- J.59 Gel<sup>c</sup>, Y.R., and Barabanov, A. (2007). Strong Consistency of the Regularized Least-Squares Estimates of Infinite Autoregressive Models. *Journal of Statistical Planning and Inference*, 137, 1260–1277.
- J.60 Gel<sup>c</sup>, Y.R., W. Miao and Gastwirth, J.L. (2005). The Importance of Checking the Assumptions Underlying Statistical Analysis: Graphical Methods for Assessing Normality. *46 Jurimetrics J.*, 3–26.
- J.61 Barabanov, Ye., and Gel, Y.R. (2005). Strong Consistency of the Least-Squares Method with a Polynomial Regularizer for Infinite AR models. *Automation and Remote Control*, 1(66), 92–108.
- J.62 Gel, Y., Raftery, A., and Gneiting, T. (2004). Calibrated Probabilistic Mesoscale Weather Field Forecasting: The Geostatistical Output Perturbation (GOP) Method (with discussion). *Journal of American Statistical Association*, 99, 575–583. The JASA Applications and Case Studies Invited Paper for the Year 2004.
- J.63 Gel, Y., Raftery, A., Gneiting, T., and Berrocal, V.J. (2004). Rejoinder to the Calibrated Probabilistic Mesoscale Weather Field Forecasting: The Geostatistical Output Perturbation (GOP) Method. *Journal of American Statistical Association*, 99, 588–590.
- J.64 Gel<sup>c</sup>, Y.R., and Fomin, V. (2001). Identification of an Unstable ARMA Equation. *Mathematical Problems in Engineering: Theory, Methods and Applications*, 7, 97–112.
- J.65 Gel<sup>c</sup>, Y.R., and Fomin, V. (1998). Identification of a linear Model of a Weakly Stationary Process by Its Realization. *Vestnik of St.-Petersburg University: Mathematics*, 31(2), 21–28.
- J.66 Gel<sup>c</sup>, Y.R., and Fomin, V. (1998). Recovering a Regression Model of a Stationary Time Series. *Vestnik of St.-Petersburg University*, 31(4), 8–14.
- J.67 Gel<sup>c</sup>, Y.R., and Fomin, V. (1997). Identification of an ARMA Equation of Weakly Stationary Time Series using the Pade Approximation. *Journal of the Russian Institute of Scientific and Technical Information*, N2358-B98.

**Peer-Reviewed Conference Papers**

- P.1 Chen\*, Y., Avrachenkov, K., Gel, Y.R. LFGCN: Levitating over Graphs with Levy Flights. *Proceedings of the 2020 IEEE International Conference on Data Mining (ICDM)*, (acceptance rate 19.7%).
- P.2 Akcora, C., Li\*, Y., Gel, Y.R., Kantarcioglu, M. BitcoinHeist: Topological Data Analysis for Ransomware Detection on the Bitcoin Blockchain. *Proceedings of the 2020 International Joint Conference on Artificial Intelligence (IJCAI)*, (acceptance rate 19.3%).
- P.3 Li\*, Y., Islambekov\*, U. D., Akcora\*, C., Smirnova, E., Gel, Y.R., Kantarcioglu, M. Dissecting Ethereum Blockchain Analytics: What We Learn from Topology and Geometry of Ethereum Graph. *Proceedings of the 2020 SIAM International Conference on Data Mining (SDM)*, (acceptance rate 19.3%).
- P.4 Abay\*, N.C., Akcora\*, C., Gel, Y.R., Islambekov\*, U., Kantarcioglu, M., Tian, Y., Thuraingham, B. (2019) ChainNet: Learning on Blockchain Graphs with Topological Features. *Proceedings of the 2019 IEEE International Conference on Data Mining (ICDM)*, (acceptance rate 18.5%).
- P.5 Akcora\*, C., Dey, A. K., Gel, Y.R., Kantarcioglu, M. (2018). Forecasting Bitcoin Price with Graph Chainlets. *Proceedings of the 22nd Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), Lecture Notes in Computer Science, vol. 10939, 765–776, Springer, Cham (acceptance rate 17.8%)*.
- P.6 Chen\*, Y., Lyubchich, V., Gel, Y.R., Winship, T. (2018). Deep Ensemble Classifiers and Peer Effects Analysis for Churn Forecasting in Retail Banking. *Proceedings of the 22nd Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), Lecture Notes in Computer Science, vol 10937, 373–385, Springer, Cham (acceptance rate 17.8%)*.
- P.7 Islambekov\*, U., Dey\*, A., Gel, Y.R., Poor, H. V. Role of Local Geometry in Robustness of Power Grid Networks (2018). *Proceedings of the IEEE Global Conference on Signal and Information Processing (GlobalSIP)*, 885-889.
- P.8 Akcora\*, C., Bakdash, J. Z., Gel, Y.R., Kantarcioglu, M., Marusich, L.R., Thuraingham, B. (2018). Attacklets: Modeling High Dimensionality in Real World Cyberattacks. *Proceedings of the 2018 IEEE International Conference on Intelligence and Security Informatics (ISI) (acceptance rate 34%)*.
- P.9 Newlands, N.K., Ghahari\*, A., Gel, Y.R., Lyubchich, V. (2019). Deep Learning for Improved Agricultural Risk Management. *Proceedings of the 52nd Hawaii International Conference on System Sciences*.
- P.10 Huang\*, X., Gel, Y.R. (2017). CRAD: Clustering with Robust Autocuts & Depth. *Proceedings of the 2017 IEEE International Conference on Data Mining (ICDM)* (acceptance rate 19.9%), 10.1109/ICDM.2017.116.
- P.11 Dey\*, A., Gel<sup>c</sup>, Y.R., Poor, H. V. (2017). Motif-Based Analysis of Power Grid Robustness under Attacks. *Proceedings of the IEEE Global Conference on Signal and Information Processing (GlobalSIP)*, 10.1109/GlobalSIP.2017.8309114 .

- P.12 Popa\*, J., Nezafati\*, K., Gel, Y.R., Zweck, J., Bobashev, G. (2016) Catching Social Butterflies: Identifying Influential Users of an Event-Based Social Networking Service. *Proceedings of the 2016 IEEE Big Data Congress*, 198–205, doi: 10.1109/BigDataCongress.2016.32 (acceptance rate 24.5%).
- P.13 Gel<sup>c</sup>, Y. and Ye. Barabanov (2002). Convergence Analysis of the Least-Squares Estimates for Infinite AR Models. In E.F. Camacho, L. Basañez, J.A. de la Puente Eds, *Proceedings of the 15th Triennial World Congress of the International Federation of Automatic Control (IFAC): Adaption and Learning, July 2002, Barcelona, Spain*, Elsevier, Vol. M, 211–216.

### Peer-Reviewed Workshop Papers

- W.1 Ofori-Boateng\*, U., Dey\*, A., Li\*, B., Zhang, J., Gel, Y.R., Poor, H. V. (2019). Assessing the Resilience of Texas Power Grid Network. *Proceedings of the IEEE Data Science Workshop (DSW)*, 280–284.
- W.2 Gel<sup>c</sup>, Y.R., Lyubchich, V., Ramirez Ramirez, L.L. (2017). Fast Patchwork Bootstrap for Quantifying Estimation Uncertainties in Sparse Random Networks. *Proceedings of the 12th SIGKDD Workshop on Learning and Mining with Graphs (MLG2016)*.
- W.3 Dey\*, A., Gel<sup>c</sup>, Y.R., Poor, H. V. (2017). Intentional Islanding of Power Grids with Data Depth. *Proceedings of the IEEE Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP2017)*, 10.1109/CAMSAP.2017.8313149.
- W.4 Ebert-Uphoff, I., Thompson, D.R., Demir, I., Gel, Y.R., Karpatne, A., Guereque, M., Kumar, V., Cabral-Cano, E., Smyth, P. (2017). A vision for the development of benchmarks to bridge geoscience and data science. *Proceedings of the International Workshop on Climate Informatics*.
- W.5 Huang\*, X., Iliev, I., Brenning, A., Gel, Y.R. (2016). Space-Time Clustering with Stability Probe while Riding Downhill. *Proceedings of the SIGKDD Workshop on Mining and Learning from Time Series (MiLeTS2016)*.
- W.6 Huang\*, X., Lyubchich, V., Brenning, A., Gel, Y.R. (2015). Analysis of dynamic trend-based clustering on Central Germany precipitation. *Proceedings of the International Workshop on Climate Informatics*.
- W.7 Jedynek, B., Liu\*, B., Lang\*, A., Gel, Y.R., and Prince, J. (2012). A Time-Change Method for Computing an Alzheimer’s Disease Progression Score. In Wang, L., Yushkevich, P.A., and S. Ourselin (ed.) *The Proceedings of the MICCAI 2012 Workshop on Novel Imaging Biomarkers for Alzheimer’s Disease and Related Disorders (NIBAD’12)*, 113–124.

### Peer-Reviewed Contributions to Books

- C.1 Ofori-Boateng\*, D., Dey\*, A., Gel, Y.R., Poor, H. V. (2020). Graph-Theoretic Analysis of Power Grid Robustness. *Advanced Data Analytics for Power Systems*, A. Tajer, S. Perlaza and H. V. Poor, Eds., Cambridge University Press, to appear.

- C.2 Tian\*, Y., Gel<sup>c</sup>, Y.R. (2016). Fast Community Detection in Complex Networks with a  $K$ -Depths Classifier. Chapter in *Big and Complex Data Analysis: Statistical Methodologies and Applications*, E.S. Ahmed, Ed., 139–157, Springer.
- C.3 Gel<sup>c</sup>, Y.R., Lyubchich\*, V., Ahmed, S.E. (2016). Catching Uncertainty of Wind: A Blend of Sieve Bootstrap and Regime Switching Models for Probabilistic Short-term Forecasting of Wind Speed. Chapter in *Advances in Time Series Methods and Applications: the A. Ian McLeod Festschrift*, W.K. Li, D. Stanford, and H. Yu, Eds., Fields Institute Communication Series; Springer, 279–293.
- C.4 Soliman\*, M., Naser\*, D., Lyubchich\*, V., Gel, Y.R. and Esterby, S. (2015). Evaluating the Impact of Climate Change on Dynamics of House Insurance Claims. Chapter in *Machine Learning and Data Mining Approaches to Climate Science: Proceedings of the Fourth International Workshop on Climate Informatics*, V. Lakshmanan, E. Gilleland, A. McGovern, and M. Tingley, Eds., Springer, 175–183.
- C.5 Lyubchich\*, V. Gray, B., and Gel, Y.R. (2015). Multilevel Random Slope Approach and Nonparametric Inference for River Temperature, Under Haphazard Sampling. Chapter in *Machine Learning and Data Mining Approaches to Climate Science: Proceedings of the Fourth International Workshop on Climate Informatics*, V. Lakshmanan, E. Gilleland, A. McGovern, and M. Tingley, Eds., Springer, 137–145.
- C.6 Konietzschke, F., Gel<sup>c</sup>, Y.R. and Brunner, E. (2014). On Multiple Contrast Tests and Simultaneous Confidence Intervals in High-Dimensional Repeated Measures Designs. Chapter in *Perspectives on High Dimensional Data Analysis*, S.E. Ahmed et al., Eds., vol. 622, 109–124, American Mathematical Society.
- C.7 Brenning, A. and Gel<sup>c</sup>, Y.R. (2012). Climate Change, Cryosphere, and Atmospheric Chemistry. Chapter in *Encyclopedia of Environmetrics*, A.-H. El-Shaarawi and W. Piegorisch, Eds., 2nd edition, Wiley, 415–421.
- C.8 Ramirez Ramirez\*, L.L., Gel, Y.R. and Ruggeri, F. (2011). Probabilistic Forecasting Models for Atmospheric Variables using the Geostatistical Output Perturbation (GOP) and Hierarchical Bayesian Models for Time and Space. Chapter in *Matemáticas, Estadística y Medio Ambiente*, Cervantes, H.J.R., Contreras, M.I. and N.I.L. Monares, Eds., University of Puebla Press, Mexico, 57–66. (In Spanish)
- C.9 Miao, W., Gel Y.R., and Gastwirth, J.L. (2006). A New Test of Symmetry about an Unknown Median. Chapter in *Random Walk, Sequential Analysis and Related Topics - A Festschrift in Honor of Yuan-Shih Chow*, Hsiung, A., Ying, Z. and C.-H., Zhang, C.-H., Eds., World Scientific Publisher, Singapore, 199–214.

## Book Reviews

- R.1 Gel, Y.R., Lyubchich, V. (2017). Book Review: "Contagion! Systemic Risk in Financial Networks" by T.R. Hurd. *Technometrics*, 59(1): 132.
- R.2 Lyubchich, V., Gel, Y.R. (2014). Book Review: "Penalty, Shrinkage and Pretest Strategies: Variable Selection and Estimation" by S. Ejaz Ahmed. *Technometrics*, 57(1): 141.

## Unrefereed Reports

- Kelly, R., Kasurak, A., Ramirez Ramirez\*, L.L., Gel, Y. and C. Duguay (2011). Synergy of CoReH<sub>2</sub>O SAR and Microwave Radiometry Data to Retrieve Snow and Ice Parameters. *The 4th deliverable document (D4) for the European Space Agency ESTEC Contract No. 22829/09/NL/JC*, 34 pages.
- Gel, Y. (2008). Report from the New Investigators Committee. *The Statistical Society of Canada Liaison*, 22(4), 17–18.

## SOFTWARE DISTRIBUTION

R package <i>snowboot</i>	Bootstrap Methods for Network Inference Ramirez Ramirez, L. L., Nezafati, K., Lyubchich, V., Chen Y., Gel, Y.R.
R package <i>funtimes</i>	Functions for Time Series Analysis Lyubchich, V., Gel, Y.R.
R package <i>lawstat</i>	Tools for Biostatistics, Public Policy, and Law Gastwirth, G.L., Gel, Y.R., Hui, W., Lyubchich, V., Miao, W., Noguchi, N. (in alphabetic order).
R package <i>nparLD</i>	Nonparametric Analysis of Longitudinal Data in Factorial Experiments Noguchi, N., Latif, M., Thangavelu, K., Konietzschke, F., Gel, Y.R., and E. Brunner.
R package <i>ProbForecastGOP</i>	Probabilistic Weather Field Forecast using the Geostatistical Output Perturbation (GOP) method Berrocal, V.J., Gel, Y.R., Raftery, A.E., and T. Gneiting.

## SELECTED INVITED PRESENTATIONS

### Plenaries & Keynotes

- Data has Shape, Shape has Meaning, Changes in Shape May Signal Threats, 2019 International Conference on Machine Learning (ICML) Time Series Workshop, Long Beach, CA, June 2019.
- Complementing the Power of deep Learning with Statistical Model Fusion: Probabilistic Forecasting of Influenza, Wuxi (Mashan) Sino-European Healthcare Cooperation Workshop, Wuxi, China, April 2019.
- Nonparametric Methods for Community Discovery in Large Sparse Networks, The 1st Symposium on Statistical Inference and Modelling, Centro de Investigación en Matemáticas (CIMAT), Guanajuato, Mexico, November 2016.
- Where Statistics and Data Science Meet Climate Risk Insurance, Climate Informatics Workshop, Nat. Center for Atmospheric Research (NCAR), Boulder, CO, September 2016.
- The Role of Modern Social Media Data in Surveillance and Prediction of Infectious Diseases: from Time Series to Networks, The 26th Annual International Conference on Statistics and Modeling in Human and Social Sciences, Cairo, March 2014.
- The Role of Modern Social Media Data in Surveillance and Prediction of Infectious Diseases: from Time Series to Networks, The 2014 Conference of Texas Statisticians, Dallas, TX, March 2014.

### Invited Research Seminars

New York University, NY, December 2020.

University of North Carolina at Greensboro, NC, October 2020.

École polytechnique fédérale de Lausanne, Lausanne, Switzerland, May 2020.

Southern Methodist University, Dallas, TX, March 2020.

Penn State University, State College, PA, December 2019.

Bowling Green State University, Bowling Green, OH, October 2019.

North Dakota State University, Fargo, ND, September 2019.

Simon Fraser University, Burnaby, BC, January 2019.

University of Texas at San Antonio, San Antonio, TX, October 2018.

Penn State University, State College, PA, April 2018.

University of California at Santa Barbara, Santa Barbara, CA, January 2018.

University of Minnesota, Minneapolis, MN, December 2017.

Baylor University, Waco, TX, November 2017.

University of Montana, Missoula, MT, October 2017.

George Mason University, Fairfax, VA, February 2017.

University of Edinburgh, Edinburgh, UK, December 2016.

Brunel University, London, UK, November 2016.



Queen Mary University of London, London, UK, November 2016.  
London School of Economics, London, UK, November 2016.  
Isaac Newton Institute for Math. Sciences, Cambridge University, UK, August 2016.  
George Mason University, Fairfax, VA, March 2016.  
Brock University, Canada, January 2016.  
University of Maryland Center for Env. Science, Solomons Island, MD, November 2015.  
Southern Methodist University, Dallas, TX, October 2015.  
Texas A&M University, College Station, TX, May 2015  
Instituto Tecnológico Autónomo de México (ITAM), Mexico City, Mexico, March 2015.  
RTI International, Research Triangle Park, NC, January 2015.  
Georgetown University, Washington, DC, December 2014  
University of Texas at Dallas, TX, October 2014.  
American University in Cairo, Cairo, Egypt, March 2014.  
University of Göttingen, Germany, October 2013.  
University of Texas at Dallas, TX, March 2013.  
Oregon State University, Corvallis, OR, February 2013.  
Penn State University, College Station, PA, December 2012.  
Instituto Tecnológico Autónomo de México (ITAM), Mexico City, Mexico, November 2012.  
York University, York, Canada, May 2012.  
The Office of the Comptroller of the Currency, Washington, DC, May 2012.  
University of Göttingen, Germany, March 2012.  
George Washington University, Washington, DC, February 2012.  
Johns Hopkins University, Baltimore, MD, November 2011.  
Georgetown University, Washington, DC, October 2011.  
McMaster University, Hamilton, Canada, October 2011.  
University of California, Davis, CA, February 2011.  
University of Waterloo, Canada, October 2010.  
Windsor University, Windsor, Canada, October 2010.  
Carleton University, Ottawa, Canada, March 2010.  
University of California, Berkeley, CA, May 2009.  
University of Toronto, Canada, November 2008.  
University of Connecticut, Storrs, CT October 2007.  
University of Missouri, Columbia, MO, April 2007.  
National Center of Environmental Prediction, Washington, DC, May 2006.  
Georgetown University, Washington, DC, February 2006.  
National Center of Environmental Prediction, Washington, DC. December 2005.  
McMaster University, Hamilton, Canada, February 2005.  
University of Montreal, Montreal, Canada, January 2005.  
University of Waterloo, Canada, March 2004.  
University of Virginia, Charlottesville, VA, March 2004.

Penn State University, State College, PA, April 2003.  
George Washington University, Washington, DC, April 2003.  
Uppsala University, Sweden, March 2003.  
North Carolina State University, Raleigh, NC, September 2002.  
Royal Institute of Technology, Sweden, June 2001.  
University of Washington, Seattle, WA, June 2001.  
Stanford University, Stanford, CA, April 2000.  
Saint-Petersburg State University, Russia, December 1999.  
Linköping University, Linköping, Sweden, August 1999.  
Umea University, Umea, Sweden, December 1998.

**PROFESSIONAL SERVICE****Editorial Service**

- |                     |  |
|---------------------|--|
| Aug 2018 – present  | Associate Editor for Technometrics   |
| Jul 2018 – present  | Guest Co-Editor for the Special Issue on change point analysis, Environmetrics                                 |
| Jul 2017 – Dec 2017 | Guest Co-Editor for the Special Issue on environmental applications TIES2017, Statistics & Probability Letters |
| Jan 2017 – present  | Associate Editor for Computational Statistics & Data Analysis  |
| Jan 2014 – present  | Associate Editor for Environmetrics  |
| Jan 2013 – present  | Associate Editor for the Canadian Journal of Statistics  |
| Aug 2008 – Dec 2014 | Associate Editor for Applied Stochastic Models in Business and Industry (ASMBI)                                |

**Organization of Technical Meetings – Leadership Roles**

- 2020 Co-organizer of the Workshop on Blockchain Data Analytics  
International Joint Conference on Artificial Intelligence (IJCAI)  
Yokohama, Japan
  
- 2020 Co-organizer of the Tutorial on Blockchain Data Analytics  
SIAM International Conference on Data Mining (SDM)  
Cincinnati, OH
  
- 2020 Co-organizer of the Tutorial on Data Science on Blockchains  
IEEE International Conference on Data Engineering (ICDE)  
Dallas, TX
  
- 2019 Co-organizer of the IEEE Workshop on Blockchain Data Analytics  
IEEE International Conference on Data Mining  
Beijing, China
  
- 2019 Co-organizer of the NSF PIs workshop  
on Algorithms for Modern Power Systems (AMPS) and  
Algorithms for Threat Detection (ATD)  
Washington, DC
  
- 2019 Co-organizer of the SAMSI Workshop on Blockchain Data Analytics  
Statistical and Applied Mathematical Sciences Institute (SAMSI)  
Durham, NC
  
- 2019 Co-organizer of the Tutorial on Blockchain Data Analytics  
23rd Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)  
Macau, SAR
  
- 2018 Co-organizer of the Tutorial on Blockchain Data Analytics  
IEEE International Conference on Data Mining  
Singapore
  
- 2018 Co-organizer of the NSF PIs workshop  
on Algorithms for Modern Power Systems (AMPS) and  
Algorithms for Threat Detection (ATD)  
Washington, DC
  
- 2018 Chair of the Scientific Committee of the 28th Meeting of  
the International Environmetrics Society (TIES)  
CIMAT, Guanajuato, Mexico

- 2017 Co-Organizer of the 5-day workshop "Synthesis of Statistics, Data Mining and Environmental Sciences in Pursuit of Knowledge Discovery",  
The Banff Int. Research Station (BIRS) for Math. Innovation and Discovery, Canada & Casa Matematica Oaxaca (CMO), Oaxaca, Mexico
- 2017 Co-Organizer of the VII International Workshop on the Perspectives on High-Dimensional Data Analysis  
CIMAT, Guanajuto, Mexico
- 2016 Co-Organizer of the VI International Workshop on the Perspectives on High-Dimensional Data Analysis  
Fields Institute, Toronto, Canada
- 2016 Co-Organizer of the 3-day workshop "Big Data Tsunami at the Interface of Statistics, Environmental Sciences and Beyond", The Banff International Research Station (BIRS) for Mathematical Innovation and Discovery, Banff, Canada.
- 2014 Co-Organizer of the 5-day workshop  
"Recent Advances and Trends in Time Series Analysis:  
Nonlinear Time Series, High Dimensional Inference and Beyond",  
The Banff International Research Station (BIRS)  
for Mathematical Innovation and Discovery, Banff, Canada.

**Organization of Technical Meetings – Committee Roles**

- 2021 Member of the Program Committee,  
The 35-th AAAI Conference on Artificial Intelligence  
virtual
- 2020 Member of the Program Committee,  
The 2020 Meeting of the International Environmetrics Society (TIES)  
virtual
- 2020 Member of the Program Committee,  
The 1st ACM SIGSPATIAL International Workshop on Modeling  
and Understanding the Spread of COVID-19  
Seattle, USA (online)
- 2020 Member of the Scientific Program Committee, CFEnetwork & CMStatistics  
London, UK
- 2020 Member of the Program Committee,  
The 29th International Joint Conference on Artificial Intelligence &  
the 17th Pacific Rim Int. Conference on Artificial Intelligence (IJCAI-PRICAI 2020)  
Yokohama, Japan
- 2020 Member of the Scientific Committee,  
The 2020 International Workshop on Applied Probability (IWAP)  
Thessaloniki, Greece
- 2020 Member of the Scientific Committee,  
The 2020 Meeting of the International Environmetrics Society (TIES)  
London, UK
- 2020 Member of the Scientific Program Committee,  
The 4th International Conference on Econometrics and Statistics (EcoSta)  
Seoul, South Korea
- 2019 Member of the Scientific Program Committee, CFEnetwork & CMStatistics  
London, UK
- 2018 Member of the Program Committee, Big Data & Information Analytics 2018 BigDIA  
Houston, TX
- 2018 Member of the Scientific Program Committee, CFEnetwork & CMStatistics  
Pisa, Italy
- 2017 Member of the Program Committee, 17th SIAM Int. Conf. on Data Mining (SDM 2017)  
Workshop on Mining Big Data in Climate and Environment  
Houston, TX
- 2017 Member of the Scientific Program Committee, CFEnetwork & CMStatistics  
London, UK
- 2017 Member of the Program Committee, The 7th Int. Workshop on Climate Informatics  
Boulder, CO
- 2017 Member of the Organizing Committee,  
The 2017 Meeting of the International Environmetrics Society (TIES)  
Bergamo, Italy
- 2016 Member of the Scientific Committee,  
The 2016 International Workshop on Applied Probability (IWAP)  
Toronto, Canada

- 2015 Member of the Organizing Committee,  
The 2015 Meeting of the International Environmetrics Society (TIES)  
Al Ain, UAE
- 2014 Member of the Organizing Committee,  
The 2014 Meeting of the International Environmetrics Society (TIES)  
Guangzhou, China
- 2013 Member of the Organizing Committee,  
The 2013 Meeting of the International Environmetrics Society (TIES)  
Anchorage, AL
- 2013 Member of the International Advisory Committee,  
The 20th MODSIM Congress of the Modelling and Simulation Society of  
Australia and New Zealand  
Adelaide, Australia
- 2012 Member of the Organizing Committee,  
The 2012 Meeting of the International Environmetrics Society (TIES)  
Hyderabad, India
- 2007 Member of the International Advisory Committee,  
The International Symposium on Business and Industrial Statistics (ISBIS 2007)  
Azores, Portugal

**Organization of Technical Meetings – Other Roles**

- 2020 Invited Session Organizer (joint with A. Dey), Joint Stat. Meeting (JSM),  
"How Statistics and Data Science Help to Quantify Resilience of Power Systems"  
Philadelphia, PA
- 2017 Invited Session Organizer (joint with V. Lyubchich), Joint Stat. Meeting (JSM),  
"Analysis of Complex Random Networks on the Guard of National Security"  
Baltimore, MD
- 2017 Invited Session Organizer, the 61th ISI World Congress,  
"Advances in Analysis of Complex Networks in Environmental Sciences"  
Marrakech, Morocco
- 2017 Invited Session Organizer,  
"Statistics and Data Mining for Sustainable Energy Modeling and Prediction"  
The 2017 Meeting of the International Environmetrics Society (TIES)  
Bergamo, Italy
- 2016 Invited Session Organizer and Chair, Joint Statistical Meeting (JSM),  
"Inference and applications of dynamic and time-dependent networks"  
The 9th International Conference on Computing & Statistics (ERCIM'16),  
Seville, Spain
- 2016 Invited Session Organizer (joint with V. Lyubchich), Joint Statistical Meeting (JSM),  
"Statistical Modeling for Climate Risk Assessment  
at the Interface of Climate Change and Insurance"  
Chicago, IL
- 2015 Invited Short Course, The 25th Annual Meeting of the Int. Environmetrics Society  
"ARCH/GARCH and Their Extensions for Modeling  
Financial and Environmental Time Series"  
Al Ain, UAE
- 2015 Invited Session Organizer, Joint Statistical Meeting (JSM),  
"Recent Advances in  
Nonparametric and Semiparametric Inference for Random Networks"  
Seattle, WA
- 2015 Invited Session Organizer (joint with V. Lyubchich), Joint Statistical Meeting (JSM),  
"Big Data of Customer Analytics in the Era of Social Media"  
Seattle, WA



- 2015 Invited Panel Organizer (joint with A. Golbeck), Joint Statistical Meeting (JSM),  
"Implicit Bias: What Statisticians Need to Know and Do"  
Seattle, WA
- 2015 Invited Session Organizer and Chair,  
The 2015 Meeting of the International Environmetrics Society (TIES),  
"Modeling and Forecasting Solar Energy"  
Al Ain, UAE
- 2015 Invited Session Organizer, the 60th ISI World Congress,  
"Modern Methods of Environmental Epidemiology:  
from Remote Sensing to Random Graphs"  
Rio de Janeiro, Brazil
- 2014 Invited Session Organizer and Chair,  
The 2014 Meeting of the International Environmetrics Society (TIES),  
"Nonparametric Methods for Multivariate Analysis of Environmental Processes"  
Guangzhou, China
- 2014 Invited Session Organizer, Joint Statistical Meeting (JSM),  
"Statistical Modeling for Climate Risk Assessment and Climate Change Adaptation"  
Boston, MA
- 2014 Invited Session Organizer (joint with E. Naumova) and Chair,  
Joint Statistical Meeting (JSM),  
"Modern Methods for Modeling and Forecasting of Infectious Diseases:  
from Visualization to Random Networks and Social Media"  
Boston, MA
- 2013 Invited Session Organizer and Chair, Joint Statistical Meeting (JSM),  
"Sampling and Resampling Methods for Random Network Inference and Estimation"  
Montreal, Canada
- 2013 Topic Contributed Panel Organizer (joint A. Golbeck), the 59th ISI World Congress,  
"Statistics as a career choice for women:  
Great rewards, persistent challenges and making the change happen"  
Hong Kong, SAR
- 2013 Roundtable Discussion Leader, the 59th ISI World Congress,  
Reception organized by the ISI Committee on Women in Statistics  
Hong Kong, SAR
- 2013 Invited Panel Organizer (joint with A. Golbeck), Joint Statistical Meeting (JSM),  
"Educating Future Leaders in Statistics and Maximizing  
the Likelihood of Leadership: Perspectives from and on Women in Statistics"  
Montreal, Canada

- 2013 Invited Session Organizer,  
The 2013 Meeting of the International Environmetrics Society (TIES),  
"Modeling and Forecasting Sustainable Energy"  
Anchorage, AL
- 2013 Invited Session Organizer,  
The Annual Meeting of the Statistical Society of Canada (SSC),  
"Sampling in Environmental Sciences"  
Edmonton, Canada
- 2013 Invited Session Organizer (joint with V. Lyubchich), AMMCS-2013:  
Laurier Centennial: International Conference on  
Applied Mathematics, Modeling & Computational Science,  
"Recent Advances in Environmental Modeling".  
Waterloo, Canada
- 2012 Invited Session Chair, Joint Statistical Meeting, "High-Dimensional Data Analysis"  
San Diego, CA
- 2012 Invited Session Organizer and Chair,  
The 2012 Meeting of the International Environmetrics Society (TIES),  
"Weather Forecasting for Energy Applications"  
Hyderabad, India
- 2011 Invited Session Organizer and Chair, AMMCS-2011:  
Laurier Centennial: International Conference on  
Applied Mathematics, Modeling & Computational Science,  
"Environmental Modeling: Trends, Diagnostics and Forecasting".  
Waterloo, Canada
- 2011 Invited Session Organizer and Chair  
The 58th World Statistics Congress of the International Statistical Institute (ISI)  
"Analysis of Lake Ice Formation and Its Environmental and Economic Impact".  
Dublin, Ireland
- 2010 Invited Session Organizer and Chair,  
The Annual Meeting of the Statistical Society of Canada (SSC),  
"Nonlinear Time Series Modeling"  
Quebec City, Canada
- 2010 Invited Session Organizer,  
The International Symposium on Business and Industrial Statistics (ISBIS 2010),  
"Robust and Nonparametric Procedures in Time Series"  
Portoroz, Slovenia

- 2010 Invited Session Organizer and Chair,  
The 2010 Meeting of the International Environmetrics Society (TIES),  
"Probabilistic Weather Forecasting"  
Margarita Island, Venezuela
- 2009 Invited Short Course, The 6th Colombian-Venezuelan Meeting of Statisticians  
"Methods of Change Point analysis in Temporally Dependent Data"  
Valencia, Colombia
- 2009 Invited Session Organizer and Chair,  
The 6th Colombian-Venezuelan Meeting of Statisticians  
"Advances in Nonlinear and Long Memory Time Series Analysis"  
Valencia, Colombia
- 2009 Invited Session Organizer and Chair,  
The 2009 International Symposium on Business and Industrial Statistics (ISBIS2009)  
"Advances in Nonlinear Time Series Analysis"  
Stellenbosch, South Africa
- 2008 Invited Session Organizer and Chair, Joint Statistical Meeting (JSM)  
"Recent Advances in Modeling Long Memory and  
Heavy Tailed Time Series"  
Denver, CO
- 2008 Topic-contributed Session Chair, Joint Statistical Meeting (JSM)  
"Nonparametric Methods for Complex and Difficult Data"  
Denver, CO
- 2008 Invited Session Organizer and Chair,  
The 18th Colombian Statistical Symposium  
"Analysis of Financial Time Series"  
Cartagena, Colombia
- 2007 Invited Session Organizer and Chair,  
The 2007 International Symposium on Business and Industrial Statistics (ISBIS2007)  
"Nonparametric Statistics in Business Litigations"  
Azores, Portugal
- 2004 Session Chair, Joint Statistical Meeting (JSM)  
"Robustness of Nonparametric and Multiple Testing Methods"  
Toronto, Canada

**External Professional Service – Leadership Roles**

- 2021–2023 President of the International Environmetrics Society (TIES)  
International Statistical Institute (ISI)
- 2019–2021 President Elect of the International Environmetrics Society (TIES)  
International Statistical Institute (ISI)
- 2013–2019 Treasurer of the International Environmetrics Society (TIES)  
International Statistical Institute (ISI)
- 2009–2010 Vice President on Membership and Outreach of  
the International Society on Business and Industrial Statistics (ISBIS)  
International Statistical Institute (ISI)
- 2007–2010 Founding Chair of the Young Investigators Committee,  
Statistical Society of Canada (SSC)

**External Professional Service – Other Roles**

- 2018 – 2020 Canadian Statistical Sciences Institute (CANSSI)  
International Scientific Advisory Committee (SAC)
- 2020-2020 Income Generating Task Force (IGTF)  
International Statistical Institute (ISI)
- 2018–2019 Member of the Best Student Paper Awards Committee  
ASA Section on Statistics in Defense and National Security
- 2018–now Member of the Institute of Mathematical Statistics (IMS)  
Committee on Data Science
- 2017–now Member of the NSF EarthCube Research Coordination Network on  
the Intelligent Systems for Geosciences community (IS-GEO RCN)
- 2016–now Member of the ASA Committee on Energy Statistics
- 2014–2015 Member of the International Statistical Institute (ISI) Committee  
on short courses for the 60th ISI World Congress
- 2013–now Member of the Committee on Women in Statistics  
of the International Statistical Institute (ISI)
- 2013–2014 Member of the Abdel El-Shaarawi TIES Award Committee
- 2012–2014 Representative-at-Large and Member of the Executive Committee,  
Caucus for Women in Statistics
- 2012–2013 Membership Committee of the Statistical Society of Canada (SSC)
- 2007–2011 Member of the Elizabeth L. Scott Award Committee,  
Representative of the Statistical Society of Canada (SSC)  
at the Committee of Presidents of Statistical Societies (COPSS).

**University and Departmental Service**

- 2014–now Graduate Program Coordinator in Statistics, Univ. of Texas at Dallas
- 2014–2017 Member of the Colloquium Committee, University of Texas at Dallas
- 2015–2016 Member of the Tenure & Promotion Committee, Univ. of Texas at Dallas
- 2014–2015 Member of the Academic Senate, University of Texas at Dallas
- 2014–2015 Member of the Hiring Committee, University of Texas at Dallas
- 2014–2015 Member of the Mid-Probationary Review Committee, Univ. of Texas at Dallas
- 2012–2013 Member of the Faculty Women in Mathematics Committee, Univ. of Waterloo
- 2012–2013 Member of the Graduate Operation Committee, University of Waterloo
- 2010–2011 Member of the Tenure and Promotion Committee, University of Waterloo
- 2009–2010 Member of the Hiring Committee (Biostatistics), University of Waterloo
- 2008–2011 Web Committee, University of Waterloo
- 2008–2011 Library representative, University of Waterloo
- 2008–2011 Committee on Stats Technical Report Series, University of Waterloo
- 2008–2010 Stats Rep. in Undergrad. Student Math Contests Big E/Small K and Bernoulli Trials
- 2005–2006 Member of the Seminar Organizing Committee, University of Waterloo
- 2004–2008 Member of the Programs Committee (Statistics), University of Waterloo

**External Reviewer for National and International Grant Agencies:**

- 2020 National Science Foundation (NSF) of USA, Panelist (multiple panels)
- 2020 Swiss National Science Foundation, Reviewer
- 2019 Banff Int. Research Station (BIRS) Workshop Program, Reviewer
- 2019 National Science Foundation (NSF) of USA, Panelist (multiple panels)
- 2019 The American Association for the Advancement of Science (AAAS) for Saudi Arabia's Ministry of Educations Research Development Office, Panelist
- 2018 National Science Foundation (NSF) of USA, Panelist
- 2016 Swiss National Science Foundation, Reviewer
- 2016 National Science Foundation (NSF) of USA, Panelist & Reviewer
- 2015 National Science Foundation (NSF) of USA, Panelist
- 2012 Czech Science Foundation, Reviewer
- 2010 The Research Grants Council of Hong Kong, Reviewer
- 2008 Canadian Foundation for Climate & Atmospheric Sciences (CFCAS)
- 2008 Canadian Foundation for Innovation (CFI), Reviewer
- annually since 2005 National Science & Eng. Research Council of Canada (NSERC)