Yang Li

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ACADEMIC EMPLOYMENT

University of Minnesota Duluth — Duluth, MN
Associate Professor (tenured), Department of Mathematics and Statistics — *July 2019 - present*

University of Minnesota Duluth — Duluth, MN
Assistant Professor, Department of Mathematics and Statistics — *Aug 2013 - June 2019*

EDUCATION

PhD in statistics, Iowa State University — Ames, IA
Advisor: Zhengyuan Zhu, Department of Statistics — *2013*

PhD in physics, University of Minnesota — Minneapolis, MN
Advisor: Joseph I. Kapusta, School of Physics and Astronomy — *2006*

BS in physics, University of Science and Technology of China — Hefei, China
School of the Gifted Young — *2001*

AWARDS

First Place Award, 10th Anniversary Best Paper Awards in *Forests* — *2019*

International Travel Award, University of Minnesota — *2017*

Student Travel Award, American Statistical Association — *2011*

Holly and Beth Fryer Award, Department of Statistics, Iowa State University — *2010*

Outstanding Student Award, University of Science and Technology of China — *1996 - 2001*

FUNDED GRANTS

University of Minnesota, Grant-in-Aid of Research, Artistry and Scholarship — (Funded) $32,997
Spatial point processes on networks — *2016 - 2018*

University of Minnesota Duluth, EVCAA Research and Scholarship Grant — (Funded) $1,500
Spatial point patterns on networks — *2015 - 2016*

University of Minnesota Duluth, SCSE Chancellor's Faculty Small Grants — (Funded) $1,500
Spatial analysis of network point processes — *2014 - 2015*

PUBLICATIONS

(*: my graduate student)

PEER-REVIEWED

1. L. Ding*, **Y. Li**, H. Wang, and K. Xu, "Measurement and analysis of cloud user interest: a glance from BitTorrent", *IEEE INFOCOM 2020*, Toronto, Canada, July 6-9, (2020).

2. **Y. Li** and Z. Zhu, "Spatio-temporal modeling of global ozone data using convolution", in press, *Japanese Journal of Statistics and Data Science*, (2020+).
3. E. R. Keyel, G. J. Niemi, M. A. Etterson, D. C. Evers, C. DeSorbo, J. C. Hoffman, J. W. Nichols, **Y. Li**, and F. Nicoletti, "Mercury accumulation in fall migrating raptors", in press, *The Condor: Ornithological Applications*, (2020+).
4. **Y. Li** and Y. Qi, "Asymptotic distribution of modularity in networks", in press, *Metrika*, (2020+).
5. P.-J. Shi, M. Li, **Y. Li**, J. Liu, T. Xie, and H. Shi, "Taylor's power law in the Wenchuan earthquake sequence with fluctuation scaling", accepted by *Natural Hazards and Earth System Sciences*, 19, 1119 (2019).
6. P.-J. Shi, D. A. Ratkowsky, **Y. Li**, L. Zhang, S. Lin, and J. Gielis, "General leaf-area geometric formula exists for plants: evidence from the simplified Gielis equation", *Forests*, 9, 714 (2018).
7. P.-J. Shi, X. Zheng, D. A. Ratkowsky, **Y. Li**, P. Wang, and L. Cheng, "A simple method for measuring the bilateral symmetry of leaves", *Symmetry* 10, 118 (2018).
8. W. A. Fuller, J. C. Legg, and **Y. Li**, "Bootstrap variance estimation for rejective sampling", *Journal of the American Statistical Association* 112, 1562 (2017).
9. **Y. Li** and H. Papei*, "Stochastic local community detection in networks", *Proceedings of the 6th International Conference on Complex Networks and Their Applications*, Complex Networks, 341 (2017).
10. P.-J. Shi, D. A. Ratkowsky, N. Wang, **Y. Li**, L. Zhao, G. Reddy, and B.-L. Li, "Comparison of five methods for parameter estimation under Taylor's power law", *Ecological Complexity* 32, 121 (2017).
11. E. Heald, T. R. Hrabik, **Y. Li**, Z. J. Lawson, S. R. Carpenter, and M. J. Vander Zanden, "Examination of variability in spatial autocorrelation in fish and zooplankton populations during a lake mixing experiment", *Aquatic Sciences* 79, 543 (2017).
12. J. I. Kapusta, G. Chen, R. J. Fries, and **Y. Li**, "Early time dynamics of gluon fields in high energy nuclear collisions", *Nuclear Physics A* 956, 553 (2016).
13. **Y. Li** and Z. Zhu, "Modeling nonstationary covariance function with convolution on sphere", *Computational Statistics and Data Analysis* 104, 233 (2016).
14. G. Chen, R. J. Fries, J. I. Kapusta, and **Y. Li**, "Early-time dynamics of gluon fields in high energy nuclear collisions", *Physical Review C* 92, 064912 (2015).
15. J. Du, C. Ma, and **Y. Li**, "Isotropic variogram matrix functions on spheres", *Mathematical Geosciences* 45, 341 (2013).
16. **Y. Li** and K. Tuchin, "Probing the low-x structure of nuclear matter with diffractive hadron production in pA collisions", *Physical Review C* 78, 024905 (2008).
17. **Y. Li**, "Baryon enhancement in high-density QCD and relativistic heavy ion collisions", *Journal of Physics G* 35, 104051 (2008).
18. **Y. Li** and K. Tuchin, "Spectrum of diffractively produced gluons in onium-nucleus collisions", *Nuclear Physics A* 807, 190 (2008).
19. **Y. Li** and K. Tuchin, "Gluon multiplicity in coherent diffraction of onium on a heavy nucleus", *Physical Review D* 77, 114012 (2008).
20. **Y. Li** and K. Tuchin, "Gluon recombination in high parton density QCD: inclusive pion production", *Physical Review D* 75, 074022 (2007).
21. R. J. Fries, J. I. Kapusta, and **Y. Li**, "From color fields to quark gluon plasma", *Nuclear Physics A* 774, 861 (2006).
22. J. I. Kapusta and **Y. Li**, "Rescattering effects on intensity interferometry", *Physical Review C* 72, 064902 (2005).
23. **Y. Li** and J. I. Kapusta, "Nonrelativistic rescattering effects on two-particle correlation", *Journal of Physics G* 31, S331 (2005).

24. J. I. Kapusta and **Y. Li**, "HBT interferometry with rescattering in the medium", *Acta Physica Hungarica A* 24, 125 (2005).
25. J. I. Kapusta and **Y. Li**, "Rescattering effects on HBT interferometry", *Journal of Physics G* 30, S1069 (2004).

OTHERS

1. E. J. Zlonis, A. Grinde, E. Condon, H. Panci, **Y. Li**, R. R. Regal, and G. J. Niemi, "Summary of breeding bird trends in the Chippewa and Superior national forests of Minnesota (1995-2014)", *NRRI technical report NRRI/TR-2014/44*, University of Minnesota Duluth (2014).
2. **Y. Li**, "Non-parametric and semi-parametric estimation of spatial covariance function", *PhD thesis*, Iowa State University (2013).
3. J. M. Larson, A. S. Tyler, **Y. Li**, and Z. Zhu, "Antecedents to biomass procurement: the essentials for producer participation survey of Iowa farmers methodology report", *SBRS technical report*, Survey & Behavioral Research Services, Iowa State University (2011).
4. **Y. Li**, "Rescattering effects on intensity interferometry and initial conditions in relativistic heavy ion collisions", *PhD thesis*, University of Minnesota (2006).
5. R. J. Fries, J. I. Kapusta, and **Y. Li**, "Near-fields and initial energy density in the color glass condensate model", *arXiv nucl-th/0604054* (2006).

SOFTWARE

IPEC: Root Mean Square Curvature Calculation
R package to calculates RMS intrinsic and parameter-effects curvatures of a nonlinear regression model

TEACHING EXPERIENCE

- STAT 8611 - Linear Models (F20)
- STAT 5572 - Statistical Inference (F19, S20)
- STAT 5571 - Probability (S15, S16, F16, S18, F18, S19)
- STAT 5511 - Regression Analysis (F15, F16, S19, S20)
- STAT 5411 - Analysis of Variance (F13, F14, F15, F16, F17, F18, F19)
- STAT 4101 - Actuarial Probability (F18, F19)
- STAT 4040 - Introduction to Survey Sampling (S16, F17)
- STAT 3611 - Introduction to Probability and Statistics (S14, F14, S15, Su17, S18, Su18, Su20)
- STAT 3411 - Engineering Statistics (Su14)
- MATH 3280 - Differential Equations and Linear Algebra (Su19)
- MATH 1250 - Precalculus Analysis (Su15, Su16)

STUDENT ADVISING

MASTER OF SCIENCE IN APPLIED AND COMPUTATIONAL MATHEMATICS

- Levi D. Pederson (Graduated May 2015)
- Xinyue Chang (Graduated May 2016)
- Melissa Sandahl (co-advise with K. L. James) (Graduated July 2016)
- Mudit Jain (co-advise with V. Vanchurin) (Graduated June 2017)
- Yang Wang (Graduated June 2017)
- Lei Ding (co-advise with H. Wang) (Graduated August 2017)

- Hadi Papei (Graduated August 2017)
- Zhenduo Wang (co-advise with T. Pedersen) (Graduated May 2018)
- Jingxia Liu (Graduated June 2018)
- McCoy Becker (Graduated July 2018)
- Richa Rawat (Graduated May 2019)
- Xinyu Sui (current)
- Tianyi Zhang (current)
- Jieming Liu (current)
- Bahoua Carmel Mobio (current)

UNDERGRADUATE RESEARCH OPPORTUNITIES PROGRAM (UROP)

- Lusha Li (Spring 2016)
- Xin Zhi (Fall 2016)
- Weizhi Jing (Spring 2019)
- Jingyi Yang (Spring 2020)

PRESENTATION

1. Contributed talk, NetSci 2019, Burlington, Vermont, "Asymptotic Distribution of Modularity in Networks", May 29, 2019.
2. Invited department seminar, Department of Mathematics and Statistics, Connecticut College, New London, CT, "Stochastic Local Community Detection in Networks", February 5, 2018.
3. Contributed talk, International School and Conference on Network Science, NetSciX 2018, Hangzhou, China, "Stochastic Local Community Detection in Networks", January 8, 2018.
4. Poster presentation, the 6th International Conference on Complex Networks and Their Applications, Lyon, France, "Stochastic Local Community Detection in Networks", November 30, 2017.
5. Invited department seminar, Department of Mathematics and Statistics, California State University Northridge, Northridge, CA, "Community Structure and Detection in Networks", November 20, 2017.
6. Department graduate colloquium, Department of Mathematics and Statistics, University of Minnesota Duluth, Duluth, MN, "Stochastic Local Community Detection in Networks", November 2, 2017.
7. Contributed talk, Spatial Statistics 2017, Lancaster University, Lancaster, United Kingdom, "Spatio-Temporal Modeling on Spheres", July 6, 2017.
8. Department graduate colloquium, Department of Mathematics and Statistics, University of Minnesota Duluth, Duluth, MN, "Introduction to Geostatistics", December 8, 2016.
9. Invited department seminar, Department of Statistics, University of Missouri-Columbia, Columbia, MO, "Use Convolution to Model Nonstationary Spatial Random Field on Sphere", March 9, 2016.
10. Contributed talk, 2015 IMS-China International Conference on Statistics and Probability, Yunnan University, Kunming, Yunnan, China, "Semiparametric Estimation of Spectral Density and Variogram with Irregular Observations", July 2, 2015.
11. Seminar, Department of Mechanical and Industrial Engineering, University of Minnesota Duluth, Duluth, MN, "From Classical Statistics to Spatial Statistics", April 29, 2015.
12. Duluth R Group seminar, Duluth, MN, "Some R Functions in Spatial Statistics", November 12, 2014.
13. Invited talk, International Conference on Advances in Interdisciplinary Statistics and Combinatorics (AISC 2014), University of North Carolina Greensboro, Greensboro, NC, "Modeling Nonstationary Covariance Function on Spheres with Convolution", October 10, 2014.
14. Invited department seminar, School of Management, China University of Mining and Technology, Xuzhou, Jiangsu, China, "Spatial Statistics and Its Applications", May 28, 2014.

15. Contributed talk, the 6th International Statistics Forum at Renmin University of China, Beijing, China, "Modeling Nonstationary Covariance Function on Spheres with Convolution", May 25, 2014.
16. Contributed talk, Next Generation Climate Data Products Workshop, the National Center for Atmospheric Research, Boulder, CO, "Modeling Nonstationary Covariance Function on Spheres with Convolution", July 16, 2013.
17. Poster presentation, the 7th International Total Survey Error Workshop, Ames, IA, "Processing Error in Erosion Estimations Based on a Longitudinal Survey", June 4, 2013.
18. Survey working group seminar, Department of Statistics, Iowa State University, Ames, IA, "Review of Soil Erosion Analysis in NRI", April 26, 2013.
19. Invited department seminar, Department of Mathematics and Statistics, University of Minnesota Duluth, Duluth, MN, "Modeling Covariance Functions on Spheres", February 26, 2013.
20. Invited department seminar, Department of Statistics, Western Michigan University, Kalamazoo, MI, "Nonparametric Modeling of Covariance Functions on Spheres", December 7, 2012.
21. Statistics Department talk, AT&T Research Lab, Florham Park, NJ, "Spatial Anomalous Events from MTS and Correlation with Cellular Network Data", July 13, 2012.
22. Survey working group seminar, Department of Statistics, Iowa State University, Ames, IA, "Survey of Iowa Farmers on Use of Cellulosic Biomass as a Bio-fuel", October 3, 2011.
23. Contributed talk, JSM 2011, Miami Beach, FL, "Calibration of Soil Erosion Estimates under New Protocols", August 3, 2011.
24. Survey working group seminar, Department of Statistics, Iowa State University, Ames, IA, "USLE and RUSLE2 Soil Loss Analysis in National Resources Inventory", October 11, 2010.
25. Contributed talk, the 20th International Conference on Ultra-Relativistic Nucleus-Nucleus Collisions (Quark Matter 2008), Jaipur, India, "Baryon Enhancement from Quasi-Classical Fields in Nuclear Collisions", February 5, 2008.
26. Invited seminar, School of Physics and Astronomy, University of Minnesota, Minneapolis, MN, "Gluon Recombination at High Parton Density", November 5, 2007.
27. Contributed talk, APS DNP meeting 2007, Newport News, VA, "Gluon Recombination at High Parton Density", October 11, 2007.
28. Contributed talk, the 20th Midwest Nuclear Theory Get-Together, Argonne National Laboratory, Argonne, IL, "Gluon Recombination at High Parton Density: Hadron Production at RHIC", October 6, 2007.
29. Invited seminar, Physics Department and RIKEN, Brookhaven National Laboratory, Upton, NY, "Near-Field Properties in Relativistic Heavy Ion Collisions", January 16, 2007.
30. Contributed talk, APS April meeting 2006, Dallas, TX, "Near-Field Properties in Relativistic Heavy Ion Collisions", April 23, 2006.
31. Invited seminar, Department of Physics and Astronomy, Iowa State University, Ames, IA, "Rescattering Effects on HBT Interferometry", February 17, 2006.
32. Group seminar, School of Physics and Astronomy, University of Minnesota, Minneapolis, MN, "Rescattering Effects on Intensity Interferometry in Relativistic Heavy-Ion Collisions", October 27, 2005.
33. Contributed talk, Hot Quarks 2004, Workshop for young scientists on the physics of ultrarelativistic nucleus-nucleus collisions, Taos Valley, NM, "Rescattering Effects on HBT Interferometry", July 22, 2004.

SERVICE

UNIVERSITY, COLLEGE, AND DEPARTMENT SERVICE

- Member of the tenure-track faculty search committee (2019 - 2020)
- Member of the department new hire committee (2019)

- Co-chair of statistics tenure-track faculty search committee (2018 - 2019)
- Member of graduate program committee (2017 - present)
- Member of statistics tenure-track faculty search committee (2017 - 2018)
- Member of statistics tenure-track faculty search committee (2016 - 2017)
- Member of undergraduate program committee (2016)
- Departmental liaison representative of Computer Science (2014 - present)
- Departmental liaison representative of Physics, Chemistry, Geology (2016 - present)
- Coordinator of STAT 3611 and STAT 3612 (2016 - present)
- Department representative of Caucus of American Statistical Association (2015 - present)
- SCSE college UROP reviewer (Spring 2014, Fall 2014, Fall 2016)
- Graduate committee member for 32 graduate students (2014 - present)

EDITORIAL SERVICE

- Academic Editor for PLOS ONE (2019 - present)

REFEREE SERVICE

- Journal of Nonparametric Statistics
- Computational Statistics and Data Analysis
- Journal of Applied Statistics
- Journal of Statistical Computation and Simulation
- Environmetrics
- Environmental and Ecological Statistics
- Communications in Statistics - Simulation and Computation
- Statistics in Medicine
- RevStat
- Physical Review Letters
- Physical Review C
- CRC Press book proposals

MEMBERSHIP

- American Statistical Association
- Institute of Mathematical Statistics
- Network Science Society