

JERZY A. WIECZOREK

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EDUCATION

- Ph.D. in Statistics, Carnegie Mellon University, Pittsburgh, PA** Expected May 2018
- Thesis Proposal: *Model-Selection Consistency of Forward Selection in High-Dimensional Regression*, Adviser: J. Lei
- M.S. in Statistics, Portland State University, Portland, OR** June 2009
- M.S. Degree Paper: *Finite Sample Properties of Minimum Kolmogorov-Smirnov Estimator and Maximum Likelihood Estimator for Right-Censored Data*, Adviser: J.S. Kim
- B.S. in Engineering, Olin College of Engineering, Needham, MA** May 2006
- Budapest Semesters in Mathematics, Budapest, Hungary** Fall 2004

RESEARCH INTERESTS

Sparse high-dimensional statistics; model selection and assessment; cross-validation; dimension reduction; visualizing data uncertainty; small area estimation; analysis of health & human rights data

PEER-REVIEWED JOURNAL ARTICLES

- Lawry, L., de Brouwer, A.M., Smeulers, A., Rosa, J.C., Kisielewski, M., Johnson, K., Scott, J., and Wieczorek, J. "The Use of Population-Based Surveys for Prosecutions at the International Criminal Court: A Case Study of Democratic Republic of Congo." *International Criminal Justice Review*, 24 (1), 2014.
- Wieczorek, J., Fernández-Moctezuma, R., and Bertini, R.L. "Techniques for Validating an Automatic Bottleneck Detection Tool Using Archived Freeway Sensor Data." *Transportation Research Record No. 2160*, pp. 87-95, 2010.

ARTICLES UNDER REVISION

- Wright, T., Klein, M., and Wieczorek, J. "A Primer on Visualizations for Comparing Populations, Including the Issue of Overlapping Confidence Intervals." (tentatively accepted)
- Lei, J., Wang, D., and Wieczorek, J. "Consistent Sequential Sparse PCA with Deflation." (revising for resubmission)

OTHER PUBLICATIONS

- Wright, T., Klein, M., and Wieczorek, J. "Ranking Populations Based on Sample Survey Data." *Research Report Series (Statistics # 2014-07)*, Washington, DC: Center for Statistical Research and Methodology, U.S. Bureau of the Census, 2014.
- Wright, T., Klein, M., and Wieczorek, J. "An Overview of Some Concepts for Potential Use in Ranking Populations Based on Sample Survey Data." *Proceedings of the 59th World Statistics Congress of the International Statistical Institute*, The Hague, The Netherlands: International Statistical Institute, 2013.
- Wieczorek, J., and Franco, C. "An Empirical Artificial Population and Design-Based Simulation for Small Area Model Evaluation." *JSM Proceedings, Section on Survey Research Methods*, Alexandria, VA: American Statistical Association, 2013.
- Wieczorek, J., Nugent, C., and Hawala, S. "A Bayesian Zero-One Inflated Beta Model for Small Area Shrinkage Estimation." *JSM Proceedings, Section on Survey Research Methods*, Alexandria, VA: American Statistical Association, 2012.
- Wieczorek, J., and Hawala, S. "A Bayesian Zero-One Inflated Beta Model for Estimating Poverty in U.S. Counties." *JSM Proceedings, Section on Survey Research Methods*, Alexandria, VA: American Statistical Association, pp. 2812-2822, 2011.

- Wiecezorek, J., and Kim, J.S. “Finite Sample Properties of Minimum Kolmogorov-Smirnov Estimator and Maximum Likelihood Estimator for Right-Censored Data.” *JSM Proceedings, Section on Statistical Computing*, Alexandria, VA: American Statistical Association, pp. 4150-4162, 2010.
- Palmer, J., Bertini, R.L., Rehborn, H., Wiecezorek, J., and Fernández-Moctezuma, R. “Comparing a Bottleneck Identification Tool with the Congested Traffic Pattern Recognition System ASDA/FOTO Using Archived Freeway Data from Portland, Oregon.” *Proceedings of the 16th World Congress on Intelligent Transport Systems*, Stockholm, Sweden, September 21-25, 2009.

RESEARCH & PROFESSIONAL EXPERIENCE

- Mathematical Statistician: U.S. Census Bureau**, Washington, DC Feb 2010 to July 2013
- Evaluated and refined models and software for small area estimation of poverty in U.S. counties and school districts; taught workshops on small area estimation, data visualization, and R software
- Graduate Assistant: Intelligent Transportation Systems Lab**, Portland, OR Sept 2007 to June 2009
- Evaluated and adapted freeway bottleneck identification algorithms. Led research design and analysis; algorithm development and graphical display in MATLAB; data transfer, cleaning, and analysis in R
- Research Analyst, Consumer Insights & Trends: Ziba Design**, Portland, OR Aug 2006 to June 2007
- Conducted interviews, focus groups, and market research to model consumer behaviors and attitudes
- Student Researcher: Olin Intelligent Vehicles Laboratory**, Needham, MA Summer 2005
- Developed stereo-vision obstacle-avoidance neural network in MATLAB for autonomous vehicle
- Intern: NASA-Langley Research Center**, Hampton, VA Summer 2000
- Checked data accuracy, tested software for wind tunnel data analysis, studied aerodynamics

TEACHING EXPERIENCE

- Teaching Assistant: “Undergraduate Advanced Data Analysis” course. Carnegie Mellon University, Spring 2017.
- Teaching Assistant: “Experimental Design for Behavioral and Social Sciences” course. Carnegie Mellon University, Fall 2017.
- Teaching Assistant: Summer Undergraduate Research Experience. Carnegie Mellon University, Summer 2016.
- Instructor: “Statistical Graphics and Visualization” course. Carnegie Mellon University, Fall 2015.
- Teaching Assistant: “Introduction to Statistical Inference” course. Carnegie Mellon University, Spring 2015.
- Teaching Assistant: “Discrete Multivariate Analysis” course. Carnegie Mellon University, Fall 2014.
- Instructor: “Experimental Design for Behavioral and Social Sciences” course. Carnegie Mellon University, Summer 2014.
- Teaching Assistant: “Sampling, Survey and Society” course. Carnegie Mellon University, Spring 2014.
- Teaching Assistant: “Statistical Computing” course. Carnegie Mellon University, Fall 2013.
- Instructor: “Best Practices for Table Design and Data Visualization” workshop. National Statistical Service of the Republic of Armenia, Feb 11-21, 2013.
- Instructor: “R Graphics Course” workshop. U.S. Census Bureau, July 9-10, 2012.
- Instructor: “Computer Applications for Small Area Estimation” workshop. U.S. Census Bureau, April 23 and 30, 2012.
- Instructor: “R 101” workshop. U.S. Census Bureau, March 8 and 22, 2012.
- Instructor: Polish language courses (Beginner I and II). The Global Language Network, Washington, DC, June 2011 to May 2012.

CONFERENCE PRESENTATIONS (presenter in bold)

- **Wieczorek, J.** and Lei, J. “Model-Selection Consistency of Forward Selection in High-Dimensional Regression.” 2017 Joint Statistical Meetings, Baltimore, MD, July 29-Aug 3, 2017.
- **Wieczorek, J.** “Statistical Graphics and Visualization: Course Learning Objectives and Rubrics.” US Conference on Teaching Statistics (USCOTS), State College, PA, May 18-20, 2017.
- **Wieczorek, J.** “Teaching Data Visualization with ‘Specs Grading.’” Tapestry Conference, Estes Park, CO, Mar 9, 2016.
- **Wieczorek, J.**, Pane, M., and Steorts, R.C. “Struggles in Small Area Estimation: Benchmarking and Weighting.” Small Area Estimation Conference 2014, Poznań, Poland, Sept 3-5, 2014.
- **Wright, T.**, Klein, M., and Wieczorek, J. “An Overview of Some Concepts for Potential Use in Ranking Populations Based on Sample Survey Data.” 2013 World Statistics Congress, Hong Kong, China, Aug 25-30, 2013.
- Wieczorek, J., and **Franco, C.** “An Empirical Artificial Population and Design-Based Simulation for Small Area Model Evaluation.” 2013 Joint Statistical Meetings, Montréal, Canada, Aug 3-8, 2013.
- **Wieczorek, J.**, Nugent, C., and Hawala, S. “A Bayesian Zero-One Inflated Beta Model for Small Area Shrinkage Estimation.” 2012 Joint Statistical Meetings, San Diego, CA, July 28-August 2, 2012.
- **Lewis, R.**, Wieczorek, J., West, L., Mazive, E., Mbofana, F., Duce, P., and Cummings, S. “The role of household wealth in HIV/AIDS deaths and treatment-seeking behaviour in Mozambique: analyses from a post-census survey using verbal autopsy.” XIX International AIDS Conference, Washington, DC, July 22-27, 2012.
- **Wieczorek, J.** “Interactively Mapping Significant Differences Between Areas.” The 8th International useR! Conference, Nashville, TN, June 12-15, 2012.
- **Wieczorek, J.**, and Hawala, S. “A Bayesian Zero-One Inflated Beta Model for Estimating Poverty in U.S. Counties.” 2011 Joint Statistical Meetings, Miami, FL, July 30-August 4, 2011.
- **Wieczorek, J.**, and Kim, J.S. “Finite Sample Properties of Minimum Kolmogorov-Smirnov Estimator and Maximum Likelihood Estimator for Right-Censored Data.” 2010 Joint Statistical Meetings, Vancouver, BC, July 31-August 5, 2010.
- **Wieczorek, J.**, and Kim, J.S. “Extending MKSFitter to right-censored data.” Annual meeting of The Western North American Region of The International Biometric Society and the Institute of Mathematical Statistics (WNAR/IMS 2009), Portland, OR, June 14-17, 2009.
- **Wieczorek, J.**, Li, H., Fernandez, R., and Bertini, R.L. “Integrating an Automated Bottleneck Detection Tool into an Online Freeway Data Archive.” 88th Annual Meeting of the Transportation Research Board, Washington, DC, January 11-15, 2009.
- Bertini, R.L., Fernandez, R., **Wieczorek, J.**, and Li, H. “Using Archived ITS Data to Automatically Identify Freeway Bottlenecks in Portland, Oregon.” 15th World Congress on ITS, New York City, NY, November 16-20, 2008.
- **Bertini, R.L.**, Li, H., Wieczorek, J., and Fernandez, R. “Using Archived Data to Systematically Identify and Prioritize Freeway Bottlenecks.” 10th International Conference on Application of Advanced Technologies in Transportation, Athens, Greece, May 27-31, 2008.
- Bertini, R.L., Fernandez, R., Li, H., and **Wieczorek, J.** “Bottleneck Identification and Forecasting in Traveler Information Systems.” CITE Annual Meeting and Quad Conference, Victoria, B.C., April 26–30, 2008.
- **Wieczorek, J.** “‘Highly Evolved’: Managing the Accordionist’s Identity in America.” 3rd Annual Greater Boston Anthropology Consortium Student Conference, Wellesley, MA, March 3, 2006.
- **Wieczorek, J.**, and Spence, S. “Solving ‘Rubik’s Polyhedra’ Using Three-Cycles.” Fall 2003 Meeting of the Northeast Section of the Mathematical Association of America, Wellesley, MA, November 21-22, 2003.

HONORS & AWARDS

- CMU Statistics Department TA Excellence Award, 2017
- F.S. Cater Prize in Statistics, 2009
- Joint Statistical Meetings (JSM) Student Stat Bowl 2nd place, 2008
- Oregon Transportation Research and Education Consortium (OTREC) Scholar, 2007-2008
- Franklin W. Olin Scholar, 2002-2006

VOLUNTEER WORK & SERVICE TO PROFESSION

Refereeing for *Annals of Statistics* (2017); *Journal of the Royal Statistical Society* (2016); *Preventing Chronic Disease* (2016); *Journal of Official Statistics* (2012, 2013, 2014); *Population Research & Policy Review* (2014); *Transportation Research Record* (2010)

New Projects Committee: Statistics Without Borders, ASA Outreach Group Dec 2014 to Sept 2016

- Manage incoming projects; coordinate between clients and volunteer team

Website Co-Chair: Statistics Without Borders, ASA Outreach Group Sept 2010 to July 2013

- Maintained website for statistical consulting volunteer organization

Data Hero: DC Action for Children, Washington, DC Mar 2012 to Oct 2012

- Collected, analyzed, and visualized open data on child well-being indicators for DC nonprofit

Adjunct Staff: StatAid, Washington, DC Nov 2010 to Nov 2011

- Analyzed survey data from Congo and Liberia regarding post-conflict trauma and mental health

MEMBERSHIPS

American Statistical Association (ASA), Bernoulli Society (BS), Institute of Mathematical Statistics (IMS), Society for Industrial and Applied Mathematics (SIAM)

LANGUAGES

R (proficient); MATLAB, Python, SAS (moderate); JavaScript (limited)

Polish (native); Spanish (limited); Hungarian, Swedish, Turkish (elementary)