# JERZY A. WIECZOREK

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#### **PROFESSIONAL EXPERIENCE**

| Associate Professor of Statistics: Colby College, Waterville, ME   | Jan 2024 to present                         |
|--|---|
| Assistant Professor of Statistics  | Sept 2018 to Dec 2023                       |
| • Teaching and conducting research at a selective liberal arts college   |   |
| Mathematical Statistician: U.S. Census Bureau, Washington, DC  | Feb 2010 to July 2013                       |
| • Evaluated and refined models and R/SAS software for small area estimation of and school districts; taught workshops on small area estimation, data visualization | poverty in U.S. counties on, and R software |
| Research Analyst, Consumer Insights & Trends: Ziba Design, Portland, OR  | Aug 2006 to June 2007                       |
| Conducted interviews, focus groups, and market research to model consumer be   | ehaviors and attitudes                      |
| RESEARCH INTERESTS   |   |
| Survey sampling; model selection and assessment; cross-validation; data visualization; poverty, health, & human-rights data; statistics education                  | small area estimation;                      |
| EDUCATION  |   |
| Ph.D. in Statistics, Carnegie Mellon University, Pittsburgh, PA  | May 2018                                    |
| • Thesis: Model Selection and Stopping Rules for High-Dimensional Forward Selection Committee: S. Balakrishnan, R.J. Tibshirani, V. Vu, L. Wasserman.              | election, Adviser: J. Lei.                  |
| • Advanced Data Analysis (ADA) Project: <i>Functional Connectivity Analysis of Autist</i> . Advisers: R. Kass, A. Ghuman.  | n using Neuroimaging Data,                  |
| M.S. in Statistics, Portland State University, Portland, OR  | June 2009                                   |
| <ul> <li>M.S. Degree Paper: Finite Sample Properties of Minimum Kolmogorov-Smirnov Estimator<br/>Estimator for Right-Censored Data, Adviser: J.S. Kim</li> </ul>   | or and Maximum Likelihood                   |
| B.S. in Engineering, Olin College of Engineering, Needham, MA  | May 2006                                    |
| Budapest Semesters in Mathematics, Budapest, Hungary   | Fall 2004                                   |
| PEER-REVIEWED PUBLICATIONS   |   |

- Wieczorek, J. "Design-based conformal prediction." *Survey Methodology*, 49 (2), 2023. Statistics Canada, Catalogue No. 12-001-X. <u>https://www150.statcan.gc.ca/n1/pub/12-001-x/2023002/article/00007-eng.htm</u>
- Good, A., Lin, J., Sieg, H., Ferguson, M., Yu, X., Zhe, S., Wieczorek, J., and Serra, T. "Recall Distortion in Neural Network Pruning and the Undecayed Pruning Algorithm." *Advances in Neural Information Processing Systems (NeurIPS) 35*, 2022. https://papers.nips.cc/paper\_files/paper/2022/hash/d3303e0ca98a267164d905bbc7947f88-Abstract-Conference.html
- Reinhart, A., Evans, C., Luby, A., Orellana, J., Meyer, M., Wieczorek, J., Elliot, P., Burckhardt, P., and Nugent, R. "Think-aloud interviews: A tool for exploring student statistical reasoning." *Journal of Statistics* and Data Science Education, 30 (2), pp. 100-113, 2022. https://doi.org/10.1080/26939169.2022.2063209
- Wieczorek, J., Guerin, C., and McMahon, T. "K-fold cross-validation for complex sample surveys." *Stat*, 11 (1), e454, 2022. <u>https://doi.org/10.1002/sta4.454</u>
- Wieczorek, J. and Lei, J. "Model-Selection Properties of Forward Selection and Sequential Cross-Validation for High-Dimensional Regression." *Canadian Journal of Statistics*, 50 (2), pp. 454-470, 2022. https://doi.org/10.1002/cjs.11635 and https://github.com/civilstat/FS-SeqCV-article
- Klein, M., Wright, T., and Wieczorek, J. "A Joint Confidence Region for an Overall Ranking of Populations." *Journal of the Royal Statistical Society: Series C*, 69 (3), pp. 589-606, 2020. https://doi.org/10.1111/rssc.12402

- Wright, T., Klein, M., and Wieczorek, J. "A Primer on Visualizations for Comparing Populations, Including the Issue of Overlapping Confidence Intervals." *The American Statistician*, 73 (2), pp. 165-178, 2019. <u>https://doi.org/10.1080/00031305.2017.1392359</u>
- 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. https://doi.org/10.1177/1057567714523982
- 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: Journal of the Transportation Research Board*, vol. 2160, pp. 87-95, 2010. <u>https://doi.org/10.3141/2160-10</u>

#### PREPRINTS

 Wieczorek, J., White, G., Cody, Z., Tan, E., Chistolini, J., McConville, K., Frescino, T., and Moisen, G. "Assessing small area estimates via artificial populations from KBAABB: a kNN-based approximation to ABB." (In revision.) <u>https://arxiv.org/abs/2306.15607</u>

### **R PACKAGES**

- Tupaj, E., and Wieczorek, J. "CIPerm: Computationally-Efficient Conf. Intervals for Mean Shift from Permutation Methods," R package version 0.2.3, 2022. <u>https://cran.r-project.org/package=CIPerm</u> Implements computationally-efficient construction of confidence intervals from permutation or randomization tests for simple differences in means, based on Nguyen (2009), <u>https://doi.org/10.15760/etd.7798</u>
- Guerin, C., McMahon, T., and Wieczorek, J. "surveyCV: Cross Validation Based on Survey Design," R package version 0.2.0, 2022. <u>https://cran.r-project.org/package=surveyCV</u> Functions to generate K-fold cross validation (CV) folds and CV test error estimates that take into account how a survey dataset's sampling design was constructed (SRS, clustering, stratification, and/or unequal sampling weights). Companion package to "K-Fold Cross-Validation for Complex Sample Surveys" by Wieczorek, Guerin, & McMahon (2022).
- Wieczorek, J. "RankingProject: The Ranking Project: Visualizations for Comparing Populations," R package version 0.4.0, 2022. <u>https://cran.r-project.org/package=RankingProject</u> Functions to generate plots and tables for comparing independently-sampled populations. Companion package to "A Primer on Visualizations for Comparing Populations, Including the Issue of Overlapping Confidence Intervals" by Wright, Klein, & Wieczorek (2019); "A Joint Confidence Region for an Overall Ranking of Populations" by Klein, Wright, & Wieczorek (2020).

## **OTHER PUBLICATIONS**

- Klein, M., Wright, T., and Wieczorek, J. "A Simple Joint Confidence Region for a Ranking of K Populations: Application to American Community Survey's Travel Time to Work Data." *Research Report Series (Statistics # 2018-04)*, Washington, DC: Center for Statistical Research and Methodology, U.S. Bureau of the Census, 2018.
- Kshirsagar, V., Wieczorek, J., Ramanathan, S., and Wells, R. "Household poverty classification in datascarce environments: a machine learning approach." *Proceedings of NeurIPS 2017 Workshop on Machine Learning for the Developing World*, 2017. Best Paper award. <u>https://arxiv.org/abs/1711.06813</u>
- 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.

- Counties." JSM Proceedings, Section on Survey Research Methods, Alexandria, VA: American Statistical Association, pp. 2812-2822, 2011.
- Wieczorek, 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.

Wieczorek, J., and Hawala, S. "A Bayesian Zero-One Inflated Beta Model for Estimating Poverty in U.S.

• Palmer, J., Bertini, R.L., Rehborn, H., Wieczorek, 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.

## ADDITIONAL RESEARCH EXPERIENCE

Statistical Consultant: Duolingo, Pittsburgh, PA July to Dec 2017 Consulted for data science team on nonparametric A/B testing for concurrent overlapping experiments Statistical Consultant: Innovations for Poverty Action, New Haven, CT Sept to Oct 2017 Reviewed statistical learning methods and R code for estimating "poverty scorecards," predictive models used by nonprofits to predict household-level poverty and target project beneficiaries 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 Student Researcher: Olin Intelligent Vehicles Laboratory, Needham, MA Summer 2005 Prototyped stereo-vision obstacle-avoidance neural network in MATLAB for autonomous vehicle Intern: NASA-Langley Research Center, Hampton, VA Summer 2000

• Validated data accuracy and tested bespoke software for wind tunnel data analysis

## **TEACHING EXPERIENCE**

Assistant Professor: Colby College, Waterville, ME

Fall 2018 to present

Course syllabi and materials: <u>https://web.colby.edu/jawieczo/teaching/</u>

| Course  | Terms | Enrollment | Status   |
|---|-------|------------|----------|
| SC212, Introduction to Statistics and Data Science          | FA18  | 27, 23     | Required |
|   | SP19  | 28         |          |
|   | FA19  | 30, 30     |          |
|   | SP20  | 28         |          |
|   | SP21  | 28         |          |
|   | FA22  | 27, 27     |          |
|   | SP23  | 28         |          |
| SC321, Statistical Modeling                                 | SP19  | 22         | Required |
|   | SP20  | 28         |          |
| SC323, Statistical Surveys, Censuses, and Society           | FA19  | 6          | Elective |
|   | FA23  | 12         |          |
| SC324, Statistical Learning in Data Science                 | SP23  | 14         | Elective |
|   | FA23  | 5          |          |
| SC326, Statistical Graphics and Principles of Visualization | SP21  | 26         | Elective |
|   | FA22  | 11         |          |

## Graduate Instructor: Carnegie Mellon University, Pittsburgh, PA Summer 2014, Fall 2015, Spring 2018

- Junior-level 36-315, Statistical Graphics and Visualization (Spring 2018)
- Master's-level 36-721, Statistical Graphics and Visualization (Fall 2015); redesigned course content & grading from scratch with a focus on formative assessment and active learning methods
- Sophomore-level 36-309, Experimental Design for Behavioral and Social Sciences (Summer 2014)

Co-Developer, "Teaching Statistics": Carnegie Mellon University, Pittsburgh, PA Jan to Dec 2017
 Proposed series of half-semester graduate courses on statistics education; co-designed course schedules, syllabi, readings, and assignments for each topic (Spring 2017: introductory statistics curricula; Fall 2017: running a pilot study on think-aloud interview protocols for validating assessment questions)

Teaching Assistant: Carnegie Mellon University, Pittsburgh, PASept 2013 to Dec 2017

• Undergraduate Advanced Data Analysis (Spring 2017), Experimental Design for Behavioral and Social Sciences (Fall 2016), Summer Undergraduate Research Experience in Statistics (Summer 2016), Introduction to Statistical Inference (Spring 2015), Discrete Multivariate Analysis (Fall 2014), Sampling, Survey and Society (Spring 2014), Statistical Computing (Fall 2013)

Workshop Instructor: U.S. Census Bureau, Washington, DC

- "Best Practices for Table Design and Data Visualization," National Statistical Service of the Republic of Armenia, Feb 11-21, 2013
- "R Graphics Course," U.S. Census Bureau, July 9-10, 2012
- "Computer Applications for Small Area Estimation," U.S. Census Bureau, April 23 and 30, 2012
- "R 101," U.S. Census Bureau, March 8 and 22, 2012

### Course Instructor: Global Language Network, Washington, DC

June 2011 to May 2012

Mar 2012 to Feb 2013

• Polish language courses (Beginner I and II)

## **INVITED PRESENTATIONS**

- Wieczorek, J. "Design-based conformal prediction for survey sampling." Summer At Census seminars (presented virtually), U.S. Census Bureau, Washington, DC, Aug 2-4, 2023.
- Wieczorek, J. "Joint Confidence Regions for Communicating Uncertainty in Rankings." Center for Statistics and the Social Sciences, University of Washington (presented virtually), Oct 5, 2022.
- Wieczorek, J., et al. "How do we assess the performance of our small area estimators?" Small Area Estimation Conference, College Park, MD, May 23-27, 2022.
- Wieczorek, J. "K-fold cross-validation for complex sample surveys." Summer At Census seminars (presented virtually), U.S. Census Bureau, Washington, DC, May 24-26, 2021.
- Wieczorek, J. "K-fold cross-validation for complex survey data." UMass Amherst, Amherst, MA, January 24, 2020.
- Wieczorek, J. "Model Selection and Stopping Rules for High-Dimensional Forward Selection." Bowdoin College, Brunswick, ME, October 22, 2019.
- Wieczorek, J. "A three-part data visualization curriculum." Symposium on Data Science and Statistics (SDSS), Bellevue, WA, May 29-June 1, 2019.
- Wieczorek, J. "Using the R Package RankingProject to Make Simple Visualizations for Comparing Populations." Summer At Census seminars, U.S. Census Bureau, Washington, DC, May 29-30, 2018. https://www.census.gov/data/academy/courses/ranking-project.html

## CONTRIBUTED CONFERENCE PRESENTATIONS (presenter in bold)

- Wieczorek, J. "Design-based conformal prediction for survey sampling." 2023 Joint Statistical Meetings, Toronto, Ontario, Canada, Aug 5-10, 2023.
- Wieczorek, J. "Joint confidence regions for communicating uncertainty in rankings." Part of topiccontributed session on "Using ranking data for decision-making." 2022 Joint Statistical Meetings, Washington, DC, Aug 6-11, 2022.
- Good, A., Lin, J., Sieg, H., Ferguson, M., Yu, X., Zhe, S., Wieczorek, J., and Serra, T. "Recall Distortion in Neural Network Pruning and the Undecayed Pruning Algorithm." 2022 Sparsity in Neural Networks Workshop, held virtually, July 13, 2022.
- **Tupaj, E.** and Wieczorek, J. "CIPerm: An R package for Computationally Efficient Confidence Intervals from Permutation Tests." The useR! Conference, held virtually, June 20-23, 2022.
- Wieczorek, J. Roundtable discussion: "Machine Learning with Complex Survey Data." 2021 Joint Statistical Meetings, held virtually, Aug 7-12, 2021.

- Bergen, S., Wieczorek, J., and Malone, C. Breakout session: "Fundamentals of data visualization for education." U.S. Conference on Teaching Statistics (USCOTS), held virtually, June 28-July 1, 2021.
- Wieczorek, J. "K-fold cross-validation for complex sample surveys." Symposium on Data Science and Statistics (SDSS), held virtually, June 2-4, 2021.
- Burckhardt, P., Wieczorek, J., **Reinhart, A.**, et al. "Writing practical pre- and post-tests for concepts in introductory courses." Carnegie Mellon University Eberly Teaching & Learning Summit, Pittsburgh, PA, Nov 1, 2019.
- Wieczorek, J. "K-fold cross-validation for complex survey data." 21st Meeting of New Researchers in Statistics and Probability, Fort Collins, CO, July 24-27, 2019.
- Reinhart, A., Wieczorek, J., et al. Breakout Session: "Using think-aloud interviews to assess student understanding of statistics concepts." U.S. Conference on Teaching Statistics (USCOTS), State College, PA, May 16-19, 2019.
- Burckhardt, P., Wieczorek, J., **Reinhart, A.**, et al. "Developing an assessment for concepts in introductory statistics and data science." Carnegie Mellon University Eberly Teaching & Learning Summit, Pittsburgh, PA, Nov 1, 2018.
- Hyun, S., **Reinhart, A.**, Wieczorek, J., et al. "Identifying misconceptions of introductory data science using a think-aloud protocol." Electronic Conference on Teaching Statistics (eCOTS), May 23, 2018.
- Kshirsagar, V., Wieczorek, J., Ramanathan, S., and Wells, R. "Household poverty classification in datascarce environments: a machine learning approach." NeurIPS 2017 Workshop on Machine Learning for the Developing World, Long Beach, CA, Dec 8, 2017.
- Burckhardt, P., Wieczorek, J., et al. "Assessment of student learning and misconception identification in an introductory statistics course." Carnegie Mellon University Eberly Teaching & Learning Summit, Pittsburgh, PA, Oct 19, 2017.
- 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." U.S. 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 Mtg. and Quad Conf., 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 Assn. of America, Wellesley, MA, November 21-22, 2003.

#### GRANTS

- "Creating testbed populations for the Partnership for Small Area Estimation (PSAE) simulation studies," National Council for Air and Stream Improvement, Inc. (NCASI) Foundation, grant no. FO-SFG-2673, subaward of US Forest Service cooperative agreement 22-CA-11221638-201: \$20,000, Summer 2023 (PI)
- Colby College, Office of Civic Engagement: course development grant for SC326 "Statistical Graphics and Principles of Visualization," \$2,500 stipend + \$500 for materials and honoraria, Fall 2022 (PI)
- McVey Data Science Initiative: course development grants for SC398 "Statistical Graphics and Principles of Visualization," \$3,000 stipend + \$500 for materials, Spring 2021; and for SC397 "Statistical Surveys, Censuses, and Society," \$3,000 stipend + \$500 for materials + \$5,000 for developing and mailing surveys, Fall 2019 (PI)
- McVey Data Science Initiative: course development grants for SC3XX "Methods in Data Science," \$3,000 stipend + \$500 for materials, Spring 2021 [approved but delayed due to pandemic]; and for SC324 "Statistical Learning," \$3,000 stipend + \$500 for materials, Fall 2020; and for SC212 "Introduction to Statistics and Data Science," \$1,500 stipend for updating lab materials, Fall 2019 (co-PI with James Scott and Liam O'Brien, Statistics Dept.)
- McVey Data Science Initiative: education & resource grants for Colby College to host an American Statistical Association (ASA) DataFest, \$1,000 for prizes, Spring 2021; and for Colby College students to attend NextGen: Data Science Day in Waltham, Mass., \$1,698 for registration and travel, Fall 2019 (PI)
- McVey Data Science Initiative: education & resource grant for a data visualization workshop for Colby College faculty, \$225.15 for refreshments, Spring 2019 (co-organizer with Suegene Noh, Biology Dept.)

#### HONORS & AWARDS

- Best Paper award, NeurIPS Workshop on Machine Learning for the Developing World, 2017
- Statistics Department TA Excellence Award, CMU, 2017
- Preliminary-round winner, Three Minute Thesis (3MT) competition, CMU, 2017
- F.S. Cater Prize in Statistics, PSU, 2009
- Joint Statistical Meetings (JSM) Student Stat Bowl 2<sup>nd</sup> place, 2008
- Oregon Transportation Research and Education Consortium (OTREC) Scholar, PSU, 2007-2008
- Franklin W. Olin Scholar, Olin College, 2002-2006

#### ADDITIONAL TRAINING

#### Future Faculty Program: Eberly Center for Teaching Excellence, CMU

Sept 2013 to May 2018

• Completed training program including 17 seminars on teaching and pedagogy; two teaching observations and follow-up review; a syllabus design project; and a teaching statement project

#### Joint Program in Survey Methodology: U.S. Census Bureau, Washington, DC Jan 2011 to Dec 2011

• Graduate courses via University of Maryland, College Park, on Inference from Complex Surveys; Small Area Estimation; Data Collection Methods in Survey Research; and Analysis of Complex Sample Data

## SERVICE TO PROFESSION & TO DEPARTMENT

**Reviewer** for Stat (2023); Annals of Applied Statistics (2022); Deep Learning Indaba (2022, 2023); PNAS (2021); Journal of Statistics and Data Science Education (2020, 2021, 2023); Journal of Machine Learning Research (2020); The American Statistician (2020); National Science Foundation (2019); Statistics Education Research Journal (2018); Annals of Statistics (2017); Journal of the Royal Statistical Society (2016); Preventing Chronic Disease (2016); Population Research & Policy Review (2014); Journal of Official Statistics (2012, 2013, 2014); Transportation Research Record (2010)

Program committee for NeurIPS 2018, '19, '20, '21 workshops on ML for the Developing World (ML4D)

Mentor for inaugural mentorship session for NeurIPS 2021 workshop on ML4D

Session chair for SDSS 2019 invited session on Visual Storytelling

**Department and campus committees** at Colby College: course evaluations committee (2020-24), judge for Goldfarb symposium (2023), Goldfarb Center faculty advisory committee (2022-24), department colloquium (2018-20, 2023), review panel for Computational Biology honors thesis proposals (2020-22), Board of Trustees Honorary Degrees subcommittee (2019-21), library committee (chair 2019-21), Scientific Inquiry working group of the distributional requirements task force (2020)

**Search committees** at Colby College: Geology visiting faculty (Spring 2023), Statistics tenure-track faculty (Fall 2018, Fall 2019, Fall 2022), Davis Institute for AI postdoc (Fall 2022)

Interviewer for other searches at Colby College: Halloran Lab for Entrepreneurship director (Spring 2023), Goldfarb Center director (Fall 2022); librarian (Fall 2020)

**Faculty advisor** at Colby College: Women in Mathematics and Computer Science club (2019-2020); American Statistical Association (ASA) DataFest (Mar 19-21, 2021); student research advisor for Emily Tupaj, Cole Guerin, and Thomas McMahon (2019-2021) and Zach Cody, Jackie Chistolini, and Emily Tan (2023); summer internship faculty sponsor for Nelson Wu (2021); honors project reader for Justin Kim (2023-24)

Honors examiner for Swarthmore College 2022 statistics honors exam

GenEd Committee, Dietrich College of Humanities & Social Sciences, CMU Mar 2016 to Dec 2017

#### **VOLUNTEER WORK**

| New Projects Committee: Statistics Without Borders, ASA Outreach Group   | Dec 2014 to Sept 2016                   |
|--|---|
| • Managed incoming projects; coordinated between clients and volunteer tear methodologies for flagging potential fraud during training of anthropometric i | n; recommended statistical interviewers |
| Statistical Consultant: Lawry Research Associates, Washington, DC  | Oct 2011 to Apr 2015                    |
| • Cleaned and re-analyzed post-conflict survey data from DR Congo for use in evidence in the International Criminal Court trial of Bosco Ntaganda          | n a journal article as well as          |
| Website Co-Chair: Statistics Without Borders, ASA Outreach Group   | Sept 2010 to July 2013                  |
| Data Hero: DC Action for Children, Washington, DC  | Mar 2012 to Oct 2012                    |
| • Collected, analyzed, and visualized open data on child well-being indicators fo  | r DC nonprofit                          |
| Adjunct Staff: StatAid, Washington, DC   | Nov 2010 to Nov 2011                    |

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

#### MEMBER

American Statistical Association (ASA); Institute of Mathematical Statistics (IMS)