
Education

- 2006 **Ph.D.**, *University of Minnesota*.
Quantitative Methods in Education, Department of Educational Psychology
- Advisor Professor Joan B. Garfield
- Thesis *A Longitudinal Investigation of the Development of College Students' Reasoning About Bivariate Data During an Introductory Statistics Course*
- 1998 **B.S.**, *Saint Cloud State University*.
Mathematics Education

Teaching Experience

- 2013–Present **Senior Lecturer**, *University of Minnesota*, Department of Educational Psychology.
- Taught undergraduate level (Basic and Applied Statistics) and graduate level (Statistical Methods I: Probability and Inference, Survey Design, Sampling, and Implementation, Statistical Methods II: Regression and the General Linear Model, Methods in Data Analysis for Educational Researcher I, Methods in Data Analysis for Educational Researcher II, Statistical Analysis of Longitudinal Data I) statistics courses.
 - Developed and taught a graduate course on methods for categorical data, *Methods for Categorical Response Data in Educational Research*.
 - Coordinated team of graduate students teaching the undergraduate statistics course.
- 2006–2012 **Lecturer**, *University of Minnesota*, Department of Educational Psychology.
- 2003–2006 **Instructor**, *University of Minnesota*, Department of Educational Psychology.
- 1998–2002 **Mathematics Teacher**, *ROCORI High School*, Cold Spring, MN.
- 1996–1998 **Mathematics Instructor**, *Saint Cloud State University*.

Teaching Honors and Awards

- 2014 **Waller Education Award**, *for outstanding contributions to and innovations in the teaching of elementary statistics*, American Statistical Association, Section on Statistical Education.
- 2013 **COGS Outstanding Faculty Award**, *University of Minnesota*, Council of Graduate Students.
- 2005 **Graduate Student Teaching Award**, *University of Minnesota*, Department of Educational Psychology.
- 1999 **Radioshack National Teacher Award Finalist**, *ROCORI High School*, Cold Spring, MN.

Work in Preparation/Review

- [2] Justice, N., Zieffler, A., Huberty, M., & delMas, R. (in review). Telling the story, building data to compare, and modeling variation: Secondary teachers' reasoning about statistical models. *ZDM*.
- [1] Sabbag, A. G., Garfield, J., & Zieffler, A. (in review). Assessing statistical literacy and statistical reasoning: The REALI instrument. *Statistics Education Research Journal*.

Publications

- [23] Stanhope, E., Ziegler, L., Haque, T., Le, L., Vines, M., Davis, G. K., **Zieffler, A.**, Brodfuehrer, P., Preest, M., Belisky, J., Umbanhowar, Jr., C., & Overvoorde, P. J. (2017). Development of a Biological Science Quantitative Reasoning Exam (BioSQuaRE). *CBE—Life Sciences Education*, 16(4), ar66. doi: 10.1187/cbe.16-10-0301
- [22] Justice, N., **Zieffler, A.**, & Garfield, J. (2017). Statistics graduate teaching assistants' beliefs, practices, and preparation for teaching introductory statistics. *Statistics Education Research Journal*, 16(1), 294–319. [https://iase-web.org/documents/SERJ/SERJ16\(1\)_Justice.pdf](https://iase-web.org/documents/SERJ/SERJ16(1)_Justice.pdf)
- [21] Sabbag, A. G., & **Zieffler, A.** (2015). Assessing learning outcomes: An analysis of the GOALS-2 instrument. *Statistics Education Research Journal*, 14(2), 93–116. [http://iase-web.org/documents/SERJ/SERJ14\(2\)_Sabbag.pdf](http://iase-web.org/documents/SERJ/SERJ14(2)_Sabbag.pdf)
- [20] Umbanhowar Jr., C., Belinsky, J. M., Brodfuehrer, P., Davis, G., Haque, T., Lee, L., McFadden, C., Overvoorde, P., Preest, M., Stanhope, L., Vines, M., **Zieffler, A.**, & Ziegler, L. (2015). Understanding the quantitative and computational skills of incoming biology students. <https://qubeshub.org/resources/806>
- [19] **Zieffler, A.**, & Huberty, M. (2015). A catalyst for change in the high school math curriculum. *CHANCE*, 28(3), 44–49. doi: 10.1080/09332480.2015.1099365
- [18] **Zieffler, A.**, & Justice, N. (2015). Teardowns, historical renovation, and paint-and-patch: Curricular changes and faculty development. Invited comment on G. Cobb, 'Mere renovation is too little too late: We need to Rethink our Undergraduate Curriculum from the Ground Up'. *The American Statistician*, 69(4). <http://dx.doi.org/10.1080/00031305.2015.1093029>
- [17] Garfield, J., Le, L., **Zieffler, A.**, & Ben-Zvi, D. (2014). Developing students' reasoning about samples and sampling variability as a path to expert statistical thinking. *Educational Studies in Mathematics*, 88(3), 327–342. doi: 10.1007/s10649-014-9541-7 <http://link.springer.com/article/10.1007/s10649-014-9541-7/fulltext.html>
- [16] Isaak, R., **Zieffler, A.**, & Garfield, J. (2013). Response. *Technology Innovations in Statistics Education*, 7(3). <http://escholarship.org/uc/item/8gq9t3c3>
- [15] **Zieffler, A.**, Isaak, R., & Garfield, J. (2013). The course as textbook: A symbiotic relationship in the introductory statistics class. *Technology Innovations in Statistics Education*, 7(3). <http://escholarship.org/uc/item/12q2z58x>
- [14] Gill, B., **Zieffler, A.**, Boynton, N., Alberts, K. S., Humphrey, P., McKenzie, J., & Posner, M. A. (2012). Response to 'Statistics à la Mode'. *AmStat News*, February, x–xx. <http://magazine.amstat.org/blog/2012/02/01/maa-response/>
- [13] Garfield, J., delMas, R., & **Zieffler, A.** (2012). Developing statistical modelers and thinkers in an introductory, tertiary-level statistics course. *ZDM—The International Journal on Mathematics Education*, 44(4), 883–898.
- [12] **Zieffler, A.**, Park, J., Garfield, J., delMas, R., & Bjornsdottir, A. (2012). The Statistics Teaching Inventory: A survey on statistics teachers' classroom practices and beliefs. *Journal of Statistics Education*, 20(1). <http://www.amstat.org/publications/jse/v20n1/zieffler.pdf>
- [11] Davison, M. L., **Zieffler, A.**, Cabrera, J., Karl, S. R., & Cohen, H. S. (2012). Automated assembly of optimally spaced and balanced paired comparisons: Controlling order effects. *Behavioral Research Methods*, 44(3), 753–764. doi: 10.3758/s13428-011-0170-0
- [10] Garfield, J., & **Zieffler, A.** (2011). Response to: "Towards more accessible conceptions of statistical inference" by C. Wild, M. Pfannkuch, M. Regan and N. J. Horton. *Journal of the Royal Statistical Society. Series A*, 174(Part 2), 280.
- [9] Garfield, J., **Zieffler, A.**, Kaplan, D., Cobb, G., Chance, B., & Holcomb, J. P. (2011). Rethinking assessment of student learning in statistics courses. *The American Statistician*, 65(1), 1–10.

- [8] Schillo, B. A., Mowery, A., Greenesid, L. O., Luxenberg, M. G., **Zieffler, A.**, Christenson, M., & Boyle, R. G. (2011). The relationship between media promotions and service volume for a statewide tobacco quitline and web-based cessation program. *BMC Public Health*, 11(939). <http://www.biomedcentral.com/1471-2458/11/939>
- [7] **Zieffler, A.**, Garfield, J., delMas, R., Bjornsdottir, A., Isaak, R., Le, L., & Park, J. (2011). Publishing in SERJ: An analysis of papers from 2002–2009. *Statistics Education Research Journal*, 10(2), 5–26. [http://www.stat.auckland.ac.nz/~iase/serj/SERJ10\(2\)_Zieffler.pdf](http://www.stat.auckland.ac.nz/~iase/serj/SERJ10(2)_Zieffler.pdf)
- [6] Garfield, J., delMas, R., & **Zieffler, A.** (2009). *Inventing and testing models*. Science Education Resource Center Digital Library project (NSF). Carleton College, Northfield. <http://serc.carleton.edu/sp/library/mea/index.html>
- [5] **Zieffler, A.**, & Garfield, J. (2009). Modeling the growth of students' covariational reasoning during an introductory statistics course. *Statistics Education Research Journal*, 8(1). [http://www.stat.auckland.ac.nz/~iase/serj/SERJ8\(1\)_Zieffler_Garfield.pdf](http://www.stat.auckland.ac.nz/~iase/serj/SERJ8(1)_Zieffler_Garfield.pdf)
- [4] Everson, M., **Zieffler, A.**, & Garfield, J. (2008). Implementing new reform guidelines in teaching introductory college statistics courses. *Teaching Statistics*, 30(3), 66–70.
- [3] **Zieffler, A.**, Garfield, J., Alt, S., Dupuis, D., Holleque, K., & Chang, B., (2008). What does research suggest about the teaching and learning of introductory statistics at the college level? A review of the literature. *Journal of Statistics Education*, 16(2). <http://www.amstat.org/publications/jse/v16n2/zieffler.pdf>
- [2] **Zieffler, A.**, Garfield, J., delMas, R., & Reading, C. (2008). A framework to support research on informal inferential reasoning. *Statistics Education Research Journal*, 7(2). [http://www.stat.auckland.ac.nz/~iase/serj/SERJ7\(2\)_Zieffler.pdf](http://www.stat.auckland.ac.nz/~iase/serj/SERJ7(2)_Zieffler.pdf)
- [1] **Zieffler, A.** (1999). A statistical journey with ninth grade students. *Math Times*, Winter, 14.

Books and Book Chapters

- [8] Garfield, J., **Zieffler, A.**, & Fry, E. (2017). What is statistics education. In D. Ben-Zvi, K. Makar, & J. Garfield (Eds.), *The international handbook of research in statistics education* (pp. 37–70). Cham, Switzerland: Springer International Publishing.
- [7] **Zieffler, A.**, & Fry, E. (eds.) (2015). *Reasoning about uncertainty: Learning and teaching informal inferential reasoning*. Catalyst Press: Minneapolis, MN.
- [6] delMas, R., Garfield, J., & **Zieffler, A.** (2014). Using TinkerPlots™ to develop tertiary students' statistical thinking in a modeling-based introductory statistics class. In T. Wassong, D. Frischmeier, P. R. Fischer, R. Hochmuth, & P. Bender (Eds.), *Mit Werkzeugen, Mathematik und Stochastik lernen—Using tools for Learning mathematics and statistics* (pp. 405–420). Wiesbaden, Germany: Springer Spektrum.
- [5] **Zieffler, A.**, & Catalysts for Change (2012). *Statistical thinking: A simulation approach to modeling uncertainty*. Minneapolis: Catalyst Press.
- [4] **Zieffler, A.**, Harring, J., & Long, J. D. (2011). *Comparing groups: Randomization and bootstrap methods using R*. New York: Wiley.
- [3] Garfield, J., delMas, R., & **Zieffler, A.** (2010). Assessing important learning outcomes in introductory tertiary statistics courses. In P. Bidgood, N. Hunt, and F. Jolliffe (Eds.), *Assessment methods in statistical education: An international perspective* (pp. 75–86). Chichester, West Sussex, England: John Wiley & Sons Ltd.
- [2] **Zieffler, A.** (2008). [Contributing Author]. In J. Garfield & D. Ben-Zvi, *Developing Students Statistical Reasoning: Connecting Research and Teaching Practice*. Springer: New York.
- [1] Ben-Zvi, D., Garfield, J., & **Zieffler, A.** (2006). Research in the statistics classroom: Learning from teaching experiments. In G. Burrill and P. C. Elliott (Eds.), *Thinking and Reasoning with Data and Chance: 68th NCTM Yearbook* (pp. 467–482). Reston, VA: National Council of Teachers of Mathematics.

Software

- [2] Brown, E., Zieffler, A., Nickodem, K., Vue, K., & Anderson, E. (2016). QME: Classic test theory item analysis. <https://github.com/zief0002/QME>
- [1] Zieffler, A., Karl, S. R., & Cabrera, J. (2011). Ross: An R package for Ross ordering. <https://github.com/zief0002/Ross>

Conference Papers and Proceedings

- [13] Justice, N., & Zieffler, A., delMas, R., & Huberty, M. (2017, July). Secondary teachers' reasoning about statistical models. *Proceedings of the Tenth International Conference on Teaching Statistics*. Rotorua, New Zealand.
- [12] Sabbag, A., Garfield, J., & Zieffler, A. (2015, July). Quality assessments in statistics education: A focus on the GOALS instrument. In M Alejandra Sorto (Ed.), *Advances in statistics education: Developments, experiences, and assessments (IASE 2015 Satellite Conference)*. Voorburg, The Netherlands: International Statistical Institute. http://iase-web.org/documents/papers/sat2015/IASE2015%20Satellite%2041_SABBAG.pdf
- [11] Parker, N., Fry, E., Garfield, J., & Zieffler, A. (2014, July). Graduate teaching assistants' beliefs, practices, and preparation for teaching introductory statistics. In K. Makar, B. de Sousa, and R. Gould (Eds.), *Sustainability in statistics education. Proceedings of the Ninth International Conference on Teaching Statistics (ICOTS-9)*. Voorburg, The Netherlands: International Statistical Institute. http://iase-web.org/icots/9/proceedings/pdfs/ICOTS9_C200_PARKER.pdf
- [10] Sabbag, A. & Zieffler, A. (2014, July). A psychometric analysis of the goals and outcomes associated with learning statistics (GOALS) instrument. In K. Makar, B. de Sousa, and R. Gould (Eds.), *Sustainability in statistics education. Proceedings of the Ninth International Conference on Teaching Statistics (ICOTS-9)*. Voorburg, The Netherlands: International Statistical Institute. http://iase-web.org/icots/9/proceedings/pdfs/ICOTS9_P27_SabbagZieffler.pdf
- [9] Zieffler, A., delMas, R. C., Garfield, J. & Brown, E. (2014, July). The symbiotic, mutualistic relationship between modeling and simulation in developing students' statistical reasoning about inference and uncertainty. In K. Makar, B. de Sousa, and R. Gould (Eds.), *Sustainability in statistics education. Proceedings of the Ninth International Conference on Teaching Statistics (ICOTS-9)*. Voorburg, The Netherlands: International Statistical Institute. http://iase-web.org/icots/9/proceedings/pdfs/ICOTS9_8B1_ZIEFFLER.pdf
- [8] delMas, R., Garfield, J., & Zieffler, A. (2014). The symbiotic role of modeling and simulation for developing students' statistical reasoning related to inference and uncertainty. In *Papers Presented at the 2014 National Council of Teachers of Mathematics Research Presession*. New Orleans, LA.
- [7] delMas, R., Garfield, J., & Zieffler, A. (2010). Developing tertiary-level students' statistical thinking through the use of model-eliciting activities. In C. Reading (Ed.), *Proceedings of the Eighth International Conference on Teaching Statistics*. Voorburg, The Netherlands: International Statistical Institute.
- [6] Zieffler, A., Garfield, J., delMas, R., and Bjornsdottir, A (2010). Development of an instrument to assess statistical thinking. In C. Reading (Ed.), *Proceedings of the Eight International Conference on Teaching Statistics*. Voorburg, The Netherlands: International Statistical Institute.
- [5] Zieffler, A. (2008). *Dirk Gently's Guide to Holistic Assessment*. In *Papers Presented at the 2008 Joint Statistical Meetings*. Denver, CO, July 31–August 7, 2008.
- [4] Garfield, J., Zieffler, A., delMas, R., Chance, B., Hilton, S., & Lesser, L. (2007). Practical issues in conducting statistics education research. In *Papers Presented at the 2006 Joint Statistical Meetings*. Seattle, WA, August 6–10, 2006.

- [3] Lane-Getaz, S., & Zieffler, A. (2007). Using simulation to introduce inference: An active learning approach. In *Papers Presented at the 2006 Joint Statistical Meetings*. Seattle, WA, August 6–10, 2006.
- [2] Zieffler, A., Garfield, J., & delMas, R. (2007). Studying the role of simulation in developing students' statistical reasoning. *Proceedings of the 56th Session of the International Statistical Institute (ISI), Lisbon, Portugal*.
- [1] Zieffler, A., Garfield, J., delMas, R., & Gould, R. (2007). Studying the development of college students' informal reasoning about statistical inference. *Proceedings of the 5th Statistical Reasoning, Thinking and Literacy (SRTL) Research Forum, Coventry, England*.

Posters, Presentations, and Workshops

- [114] Justice, N., Zieffler, A., Huberty, M., & delMas, R. (2017, July). *Secondary teachers' reasoning about statistical models*. Presentation at the 10th Statistical Reasoning, Thinking and Literacy (SRTL) Research Forum, Rotorua, New Zealand.
- [113] Zieffler, A. (2017, July). *The idle ramblings of an inquisitive malcontent (or discussing models)*. Invited presentation at the 10th Statistical Reasoning, Thinking and Literacy (SRTL) Research Forum, Rotorua, New Zealand.
- [112] Justice, N., Zieffler, A., & Garfield, J. (2017, March). *An investigation of statistics graduate students' communities of practice for teaching*. Poster presented at the University of Minnesota Department of Educational Psychology Graduate Student Research Day, Minneapolis, MN.
- [111] Kaplan, D., Zieffler, A., McNamara, A., Kozak, K., & Roith, J. (2017, June). *statPREP* A workshop presented at St. Catherine University, St. Paul, MN.
- [110] Zieffler, A., Sullivan, A., Utts, J., & Wender, B. (2017, May). *Statistics and the emerging discipline of data science*. Invited presentation and breakout session at the United States Conference on Teaching Statistics. State College, PA.
- [109] Zieffler, A., Belitsky, J., Stanhope, E., & Overvoorde, P. (2017, March). *Development of BioSQuaRE*. Invited presentation at the HHMI Constellation Studio Meeting, Chevy Chase, MD.
- [108] Zieffler, A., & Stohl Lee, H. (2017, February). *Using simulations and modeling environments as data sources*. Invited presentation at the Data Science Education Technology Conference. Berkeley, CA.
- [107] Zieffler, A. (2016, December). *Increasing diversity in data science*. Invited presentation at Envisioning the data science discipline: The undergraduate perspective. National Academies of Sciences, Engineering, and Medicine, Washington DC.
- [106] LeBeau, B., Zieffler, A., & Nikodem, K. (2016, August). *Estimating NCAA football coaches' abilities: An application of item response theory*. Presentation at the Joint Statistical Meetings, Chicago, IL. <http://educate-r.org/2016/07/31/jsm2016.html>
- [105] Brown, E., Vue, K., & Zieffler, A. (2016, June). *Convenient educational and psychological test reporting with the QME package and a Shiny UI*. Presentation at the 2016 UseR! conference, Palo Alto, CA..
- [104] Overvoorde, P., Belitsky, J., Brodfuehrer, P., Davis, G., Haque, T., Le, L., Preest, M., Stanhope, L., Umbanhowar, C., Jr., Vincas, M., Zieffler, A., & Ziegler, L. (2016, April). *Lessons learned during the development of BioSQuaRE, an instrument to assess undergraduate biological quantitative skills*. Presentation at the HHMI Constellation Studios for Science Education, Chevy Chase, MD.
- [103] Johnston-Goodstar, K., VeLure Roholt, R. R., Fink, A., & Zieffler, A. (2016, April). *School climate and Native American youth well-being*. Roundtable presentation at the annual meeting of the American Educational Research Association, Washington DC.

- [102] **Zieffler, A.** (2016, March). *Putting the CART before the horse: Introducing advanced methodologies in introductory statistics courses.* Invited presentation at the Canadian Statistical Science Institute (CANSSI) Statistics Education Workshop at the Fields Institute, Toronto, Ontario, Canada. <http://www.fields.utoronto.ca/activities/15-16/statistics-ed-research>
- [101] Lebeau, B., **Zieffler, A.**, & Nickodem, K. (2015, December). *Web scraping to item response theory: A college football adventure.* Invited presentation at the Central Iowa R Users Group, Des Moines, IA. <http://educate-r.org/2015/12/04/centraliowaruser/>
- [100] Vines, M., Stanhope, L., Belitsky, J., Brodfuehrer, P., Davis, G., Haque, T., Le, L., Overvoorde, P., Preest, M., Umbanhowe, C., Jr., **Zieffler, A.**, & Ziegler, L (2015, November). *Development of BioSQuaRE, an instrument, an instrument to assess undergraduate biological quantitative skills.* Poster presented at the Crossing Boundaries: Transforming STEM Education, Network for Academic Renewal STEM Conference, Seattle, WA.
- [99] **Zieffler, A.**, & Huberty, M. (2015, November). *Modeling and simulation via CATALST: An alternative option for high school students.* Presentation at the National Council of Teachers of Mathematics Regional Conference, Minneapolis, MN.
- [98] Sabbag, A., Garfield, J., & **Zieffler, A.** (2015, October). *A focus on statistical reasoning. What did we learn from the GOALS instrument?* Invited presentation at Stat Chat, Macalester College, St. Paul, MN.
- [97] **Zieffler, A.** & Huberty, M. (2015, October). *Modeling and simulation via CATALST: An alternative option for high school students.* Invited webinar for the ASA K-12 Statistics Education Webinar Series. <https://www.amstat.org/education/webinars/>
- [96] Sabbag, A., Garfield, J., & **Zieffler, A.** (2015, July). *Quality assessments in statistics education: A focus on the GOALS instrument.* Presentation at the International Association for Statistics Education Satellite Conference, Rio de Janeiro, Brazil.
- [95] **Zieffler, A.** (2015, July). *Statistics education: Is an evidence-based discipline based on evidence?* Invited presentation at the Canadian Statistical Sciences Institute's Statistics Education Workshop at The University of Western Ontario, London, Ontario, Canada.
- [94] Davis, G., Stanhope, L., Belitsky, J., Brodfuehrer, P., Haque, T., Le, L., McFadden, C., Overvoorde, P., Preest, M., Umbanhowe, C., Jr., Vines, M., **Zieffler, A.**, & Ziegler, L. (2015, June). *Defining the quantitative skills of incoming biology students.* Poster presented at the HHMI Constellation Studio A meeting, Chevy Chase, MD.
- [93] Belitsky, J., Vines, M., Darling, N., Brodfuehrer, P., Davis, G., Haque, T., Le, L., McFadden, C., Overvoorde, P., Preest, M., Stanhope, L., Umbanhowe, C., Jr., **Zieffler, A.**, & Ziegler, L (2015, May). *Assessing quantitative skills preparedness and learning.* Presentation at the Ohio Project Kaleidoscope Conference, Otterbein University, Westerville, OH.
- [92] delMas, R., Garfield, J., **Zieffler, A.**, & Fry, E. (2015, May). *e-ATLAS: Evaluation and assessment of teaching and learning about statistics.* Poster presented at the United States Conference on Teaching Statistics (USCOTS), State College, PA.
- [91] Overvoorde, P., Belitsky, J., Brodfuehrer, P., Davis, G., Haque, T., Le, L., McFadden, C., Preest, M., Stanhope, L., Umbanhowe, C., Jr., Vines, M., **Zieffler, A.**, & Ziegler, L.. (2015, May). *Defining the quantitative and computational skills of incoming biology students.* Presentation at the Understanding Interventions Conference, San Diego, CA.
- [90] delMas, R., Brown, E., & **Zieffler, A.** (2015, April). *A comparison between randomization-based and conventional introductory statistics courses.* Invited presentation at the School of Social Science, University of Iceland, Reykjavik.
- [89] delMas, R., Brown, E., & **Zieffler, A.** (2015, March). *A comparison between randomization-based and conventional introductory statistics courses.* Invited presentation at the Mid-Michigan Chapter of the American Statistical Association and faculty and students of the Department of Mathematics, Central Michigan University, Mount Pleasant, MI.

- [88] Overvoorde, P., Belitsky, J., Brodfuehrer, P., Davis, G., Haque, T., Le, L., McFadden, C. Preest, M., Stanhope, L., Umbanhowe, C., Jr., Vincas, M., **Zieffler, A.**, & Ziegler, L. (2015, February). *Past and future of BioSQuaRE as an instrument developed by the Q6 Consortium*. Presentation at the Quantitative Undergraduate Biology Education Summit, Raleigh, NC.
- [87] Garfield, J., delMas, R., **Zieffler, A.**, Fry, E. B., & Pearl, D. (2015, January). *Evaluation and assessment of teaching and learning about statistics (e-ATLAS)*. Poster presented at the Joint Mathematics Meeting, San Antonio, TX.
- [86] Galos, D., Hurtado, G., Marczak, M., Lim, S. S., **Zieffler, A.**, Alviz, K., & Rajasenkar, N. (2014, November). *Physical activity And screen time among students receiving SNAP-Ed: A latent-class analysis*. Poster presented at the American Public Health Association Annual Meeting and Exposition, New Orleans, LA.
- [85] Justice, N., Garfield, J., Fry, E., & **Zieffler, A.** (2014, July). *The Graduate Student Statistics Teaching Inventory*. Paper presented at the Ninth International Conference on Teaching Statistics (ICOTS-9), Flagstaff, Arizona.
- [84] **Zieffler, A.**, delMas, R., Garfield, J., & Brown, E. (2014, July). *The symbiotic, mutualistic relationship between modeling and simulation in developing students' statistical reasoning about inference and uncertainty*. Invited paper presented at the Ninth International Conference on Teaching Statistics (ICOTS-9), Flagstaff, Arizona.
- [83] delMas, R., **Zieffler, A.**, & Brown, E. (2014, April). *The symbiotic role of modeling and simulation for developing students' statistical reasoning related to inference and uncertainty*. Invited presentation at the National Council of Teachers of Mathematics Research Pre-session, New Orleans, LA.
- [82] Le, L., Ziegler, L., & **Zieffler, A.** (2014, March). *Developing a quantitative skills assessment for incoming biology students*. Poster presented at Graduate Student Research Day, University of Minnesota, Minneapolis, MN.
- [81] Peralta Torres, Y. E., & **Zieffler, A.** (2014, March). *Do knowledge and beliefs matter? A profile of future primary mathematics teachers*. Poster presented at Graduate Student Research Day, University of Minnesota, Minneapolis, MN.
- [80] **Zieffler, A.** & Parker, N. (2014) *CATALST: Introductory statistics using randomization and bootstrap methods*. Workshop presented at the Joint Mathematics Meetings, Baltimore, MD.
- [79] delMas, R., **Zieffler, A.**, & Brown, E. (2013, August). *Students' emerging reasoning with uncertainty in a randomization-based first course in statistics at the tertiary level*. Presentation at the Eighth International Research Forum on Statistical Reasoning, Thinking, and Literacy, Duluth, MN.
- [78] **Zieffler, A.** (2013, March). *Using R for data analysis*. A workshop presented at the Minnesota Evaluation Studies Institute, Minneapolis, MN.
- [77] Garfield, J., delMas, R. & **Zieffler, A.** (2013, January). *Collaborative research: The CATALST project, change agents for teaching and learning statistics*. Refereed poster presented at the Transforming Undergraduate Education in STEM: Building a Community to Transform Undergraduate STEM Education conference sponsored by the TUES division of the National Science Foundation, Washington, DC.
- [76] Fry, E., Garfield, J., delMas, R., & **Zieffler, A.** (2013, January). *e-ATLAS: Evaluation and assessment of teaching and learning about statistics*. Invited poster presented at the Joint Mathematics Meetings, San Diego, CA.
- [75] Fry, E., Ziegler, L., Garfield, J., **Zieffler, A.**, & delMas, R. (2013, January). *The CATALST Course: Using randomization-based methods in an introductory statistics course*. Invited panel presentation at the Joint Mathematics Meetings, San Diego, CA.
- [74] Garfield, J., Kaplan, D., Konold, C., Lock, R., & **Zieffler, A.** (2012, July). *Models and modeling in introductory statistics classes*. Invited panel presentation at the Joint Statistics Meetings, Boston, MA.

- [73] Isaak, R., Garfield, J., **Zieffler, A.**, & delMas, R. (2012, June). *A different introductory statistics menu: Randomization and resampling techniques*. Invited presentation at the Quantitative Analysis Center Summer Workshop, Wesleyan University, Middletown, CT.
- [72] Isaak, R., Le, L., Ziegler, L., Garfield, J., **Zieffler, A.**, & delMas, R. (2012, May). *A flavor of the CATALST course: Using randomization-based methods in an introductory statistics course*. An invited workshop presented at the First Biennial Electronic Conference on Teaching Statistics. <http://www.causeweb.org/ecots/workshop>
- [71] Garfield, J., delMas, R., & **Zieffler, A.** (2012, January). *Evaluation and assessment of teaching and learning about statistics (e-ATLAS)*. Invited poster presented at the Joint Mathematics Meetings, Boston, MA.
- [70] Garfield, J., delMas, R., **Zieffler, A.**, Le, L., Ziegler, L., & Isaak, R. (2012, January). *CATALST implementers workshop*. A workshop for CATALST implementers presented at the Joint Mathematics Meetings, Boston, MA.
- [69] Garfield, J., delMas, R., **Zieffler, A.**, Le, L., Isaak, R. & Ziegler, L. (2012, January). *Change agents for teaching and learning statistics: The catalyst cooks come to Harvard*. Invited presentation at Harvard University, Cambridge, MA.
- [68] Garfield, J., delMas, R., **Zieffler, A.**, Rossman, A., Chance, B., Holcomb & H., Cobb, G. (2012, January). *Change agents for teaching and learning statistics (CATALST)*. Invited poster presented at the Joint Mathematics Meeting, Boston, MA.
- [67] Isaak, R., **Zieffler, A.**, Garfield, J., & Kaplan, D. (2012, January). *Developing a modeling concept inventory*. Presentation at the Joint Mathematics Meetings, Boston, MA.
- [66] **Zieffler, A.**, & Garfield, J. (2012, January). *Teaching introductory statistics to college students who have taken curricula based on the CCSS*. Invited presentation at the Joint Mathematics Meetings, Boston, MA.
- [65] **Zieffler, A.** (2011, December). *Computing tools for the applied data analyst*. An invited presentation at the EDMS Measurement & Statistics Monday Symposia, University of Maryland, College Park, MD.
- [64] **Zieffler, A.**, & Harring, J. (2011, December). *Comparing Groups: Randomization and Bootstrap Methods Using R*. An invited workshop presented at The 67th Deming Conference on Applied Statistics, Atlantic City, NJ.
- [63] Isaak, R., **Zieffler, A.**, Garfield, J., & Kaplan, D. (2011, November). *Developing a concept inventory for modeling*. An M-Cast presented for Project MOSAIC. <http://www.mosaic-web.org/MCAST/videos/MCAST-2011-11-18/index.htm>
- [62] Isaak, R., Garfield, J., delMas, R., **Zieffler, A.**, Rossman, A., Chance, B., Holcomb, J., Cobb, G., Everson, M., Ziegler, L., & Le, L. (2011, August). *The course as textbook*. Invited paper presented at the Joint Statistical Meetings, Miami, FL.
- [61] Park, J., delMas, R., **Zieffler, A.**, & Garfield, J. (2011, August). *A research-based statistics course for tertiary students*. Paper presented at the 58th Session of the International Statistical Institute (ISI), Dublin, Ireland.
- [60] Ziegler, L., **Zieffler, A.**, Garfield, J., delMas, R., Rossman, A., Chance, B., Holcomb, J., Cobb, G., Isaak, R., & Le, L. (2011, August). *CART in CATALST*. Invited paper presented at the Joint Statistical Meetings, Miami, FL.
- [59] **Zieffler, A.**, delMas, R., & Garfield, J. (2011, July). *How do tertiary students reason about samples and sampling in the context of a modeling and simulation approach to inference?* Presentation at the 7th Statistical Reasoning, Thinking and Literacy (SRTL) Research Forum, Texel Island, The Netherlands.
- [58] Isaak, R., Le, L., Ziegler, L., Garfield, J., **Zieffler, A.**, & delMas, R. (2011, June). *Create an iron chef in statistics classes?* Invited Web seminar presented for the Consortium for the Advancement of Undergraduate Statistics Education (CAUSE), The Ohio State University, Columbus, OH. <http://www.causeweb.org/webinar/teaching/2011-06>

- [57] Garfield, J., delMas, R., **Zieffler, A.**, Rossman, A., Chance, B., Holcomb, J., Cobb, G., Isaak, R., Le, L., & Ziegler, L. (2011, May). *CATALST implementers workshop*. A workshop for CATALST implementers presented at The United States Conference on Teaching Statistics, Raleigh, NC.
- [56] **Zieffler, A.** (2011, May). *Using R for teaching and research*. A workshop presented at North Dakota State University, Fargo, ND.
- [55] **Zieffler, A.** (2011, May). *Using R for teaching bootstraps and randomizations*. Demonstration session at the United States Conference on Teaching Statistics, Raleigh, NC.
- [54] **Zieffler, A.**, delMas, R., Groth, R., & Mvududu, N. (2011, May). *Introduction to qualitative research methods in statistics education research*. Invited presentation at the United States Conference on Teaching Statistics, Raleigh, NC.
- [53] Garfield, J., delMas, R., & **Zieffler, A.** (2011, March). *Developing students' statistical reasoning through active learning*. Invited presentation at the Japanese Conference on Teaching Statistics, Rikkyo University, Tokyo, Japan.
- [52] Garfield, J., delMas, R., **Zieffler, A.**, Le, L., Isaak, R., & Ziegler, L. A. (2011, March). *A different flavor of introductory statistics: Teaching students to really cook*. Invited presentation at the Center for Statistical Information, Rikkyo University, Tokyo, Japan.
- [51] Garfield, J., **Zieffler, A.**, delMas, R., Park, J., Bjornsdottir, A., & Isaak, R. (2011, April). *Assessing what students really understand about statistical inference*. Poster presented at the annual meeting of the American Educational Research Association, New Orleans, LA.
- [50] **Zieffler, A.**, Garfield, J., delMas, R., Rossman, A., Chance, B., Holcomb, J., Cobb, G., Isaak, R., Le, L., & Ziegler, L. (2011, April). *It takes a village to effect change: The CATALST course teaching experiment*. Invited presentation at the National Council of Teachers of Mathematics Research Presession, Indianapolis, IN.
- [49] delMas, R., Garfield, J., **Zieffler, A.**, Le, L., Isaak, R., & Ziegler, L. (2011, February). *A different flavor of introductory statistics: Teaching students to really cook*. Invited presentation at Stat Chat, Macalester College, St. Paul, MN.
- [48] delMas, R., Garfield, J., **Zieffler, A.**, Le, L., Isaak, R., & Ziegler, L. (2011, February). *A different flavor of introductory statistics: Teaching students to really cook*. Invited presentation at the Department of Statistics, Brigham Young University, Salt Lake City, UT.
- [47] delMas, R., Garfield, J., **Zieffler, A.**, Le, L., Isaak, R., & Ziegler, L. (2011, February) *A different flavor of introductory statistics: Teaching students to really cook*. Invited presentation at the Fariborz Maseeh Department of Mathematics and Statistics, Portland State University, Portland, OR.
- [46] delMas, R., Garfield, J., **Zieffler, A.**, Le, L., Isaak, R., Park, J., & Ziegler, L. (2011, January). *A different flavor of introductory statistics: Teaching students to really cook*. Poster presented at The Joint Mathematics Meetings, New Orleans, LA.
- [45] delMas, R., Garfield, J., **Zieffler, A.**, Le, L., Isaak, R., & Ziegler, L. (2011, January). *A different flavor of introductory statistics: Teaching students to really cook*. Invited presentation at the Centre for Methodology of Educational Research, Katholieke Universiteit Leuven, Belgium.
- [44] Garfield, J., delMas, R., **Zieffler, A.**, Le, L., Isaak, R., & Ziegler, L. (2011, January). *A different flavor of introductory statistics: Teaching students to really cook*. Invited poster presented at the AAAS and NSF sponsored CCLI-TUES Principal Investigators' conference, Transforming Undergraduate Education in STEM: Making and Measuring Impacts, Washington, DC.
- [43] Garfield, J., delMas, R., **Zieffler, A.**, Rossman, A., Chance, B., Holcomb, J., & Cobb, G. (2011, January). *CATALST implementers workshop*. A workshop presented at The Joint Mathematics Meetings, New Orleans, LA.
- [42] Garfield, J., delMas, R., & **Zieffler, A.** (2010, July). *Developing tertiary-level students' statistical thinking through the use of model-eliciting activities*. Presentation at the Eighth International Conference on Teaching Statistics, Ljubljana, Slovenia.

- [41] **Zieffler, A.** (2010, July). *Assessment for learning*. Invited presentation for the Project MOSAIC Kick-Off Workshop, Institute for Mathematics and its Applications, Minneapolis, MN.
- [40] **Zieffler, A., Garfield, J., & delMas, R.** (2010, July). *Development of an instrument to assess statistical thinking*. Paper presented at the Eighth International Conference on Teaching Statistics, Ljubljana, Slovenia.
- [39] Garfield, J., delMas, R., **Zieffler, A.**, Rossman, A., Chance, B., Holcomb, J., & Cobb, G. (2010, June). *CATALST Workshop*. A workshop presented at the University of Minnesota, Minneapolis, MN.
- [38] delMas, R., Garfield, J., & **Zieffler, A.** (2010, May). *A radical approach to teaching introductory statistics: The CATALST project*. Invited presentation at the 38th Meeting of the Statistical Society of Canada, Quebec City, Quebec, Canada.
- [37] Garfield, J., delMas, R., & **Zieffler, A.** (2010, May). *Building a statistics course on model-eliciting activities*. Poster presented at the annual meeting of the American Educational Research Association, Denver, CO.
- [36] Park, J., Bjornsdottir, A., **Zieffler, A.**, Garfield, J., & delMas, R. (2010, May). *Developing a statistics teaching and beliefs survey*. Paper presented at the annual meeting of the American Educational Research Association, Denver, CO.
- [35] **Zieffler, A.** (2010, May). *Vive la reformie! On the history of statistics education*. Invited presentation for the Statistics Department, University of California, Los Angeles.
- [34] **Zieffler, A.** (2010, March). *Using R for statistical analysis*. Invited presentation for the Minnesota Evaluation Studies Institute, Bloomington, MN.
- [33] Garfield, J., delMas, R., & **Zieffler, A.** (2010, February). *Sample an AIMS activity: What makes the standard deviation larger or smaller?* Invited Web seminar for the Consortium for the Advancement of Undergraduate Statistical Education (CAUSE), The Ohio State University, Columbus, OH.
- [32] Garfield, J., delMas, R., & **Zieffler, A.** (2010, January). *Change agents for teaching and learning statistics*. Poster presented at the Joint Mathematics Meetings, San Francisco, CA.
- [31] Garfield, J., delMas, R., **Zieffler, A.**, Rossman, A., Chance, B., Holcomb, J., & Cobb, G. (2010, January). *Become a catalyst for change in statistics education*. A workshop presented at The Joint Mathematics Meetings, San Francisco, CA. http://www.ams.org/amsmtgs/2124_maaancillary.html
- [30] **Zieffler, A.** (2010, January). *Excuse me ... Where is the Department of Statistics Education?* Invited presentation at the Joint Mathematical Meetings, San Francisco, CA.
- [29] delMas, R., Garfield, J., & **Zieffler, A.** (2009, November). *Using model-eliciting activities to teach statistics*. A workshop presented at the annual meetings of the American Mathematics Association of Two-Year Colleges, Las Vegas, NV.
- [28] Garfield, J., delMas, R., & **Zieffler, A.** (2009, September). *Science Education Resource Center Digital Library project*. Presentation at Stat Chat, Macalester College, St. Paul, MN.
- [27] **Zieffler, A.** (2009, September). *Vive la reformie! On the history of statistics education*. Invited presentation at Stat Chat, Macalester College, St. Paul, MN.
- [26] delMas, R., Garfield, J., & **Zieffler, A.** (2009, August). *A national survey on teaching practices in undergraduate statistics instruction*. Invited presentation at the Joint Statistical Meetings, Washington, DC.
- [25] **Zieffler, A., Garfield, J., & delMas, R.** (2009, August). *Change agents for teaching and learning statistics: The CATALST project*. Invited presentation at the Joint Statistical Meetings, Washington, DC.
- [24] Garfield, J., delMas, R., **Zieffler, A.**, Rossman, A., Chance, B., & Holcomb, J. (2009, June). *Become a catalyst for change in statistics education*. A CAUSEway Workshop presented at The Ohio State University, Columbus, OH. http://www.causeweb.org/workshop/uscots09_catalyst4change/

- [23] Kaplan, D., & Zieffler, A. (2009, June). *Using R for teaching statistics*. Invited presentation at the United States Conference on Teaching Statistics, Columbus, OH.
- [22] Schillo, B., Dreher, M., St. Claire, A., Luxenberg, M., Christenson, M., & Zieffler, A. (2009, April). *Promoting statewide helpline and web-based cessation services: An analysis of service volumes and media efforts*. Paper presented at the Joint Conference of Society for Research on Nicotine and Tobacco and Society for Research on Nicotine and Tobacco-Europe, Dublin, Ireland.
- [21] Zieffler, A. (2009, April). *Using R in the introductory graduate statistics sequence*. Presentation for the Educational Statisticians Special Interest Group, at the annual meeting of the American Educational Research Association, San Diego, CA.
- [20] delMas, R., Garfield, J., & Zieffler, A. (2009, February). *Aiming to improve students' statistical reasoning: An introduction to AIMS materials*. Invited Web seminar for the Consortium for the Advancement of Undergraduate Statistics Education (CAUSE), The Ohio State University, Columbus, OH.
- [19] Kaplan, D., delMas, R., & Zieffler, A. (2009, February). *Starting with R*. A workshop presented at Macalester College, St. Paul, MN. <http://www.macalester.edu/~kaplan/startingwithr/>
- [18] Zieffler, A. (2008, October). *Graphics and Visualizations*. Invited presentation at Stat Chat, Macalester College, St. Paul, MN.
- [17] Zieffler, A. (2008, August). *Dirk Gently's guide to holistic assessment*. Invited paper presented at the Joint Statistical Meetings, Denver, CO.
- [16] Garfield, J., delMas, R., & Zieffler, A. (2008, June). *AIMS: Adapting and Implementing Innovative Materials in Statistics*. A CAUSEway Workshop presented at the University of Minnesota, Minneapolis, MN. <http://www.causeweb.org/workshop/aims/>
- [15] Zieffler, A. (2008, March). *Rethinking graduate applied educational statistics classes*. Presentation for the Educational Statisticians Special Interest Group, at the annual meeting of the American Educational Research Association, New York, NY.
- [14] delMas, R., Garfield, J., & Zieffler, A. (2008, January). *Innovative, research-based activities for a first course in statistics*. Paper presented at the Joint Mathematics Meetings, San Diego, CA.
- [13] delMas, R., Garfield, J., & Zieffler, A. (2008, January). *Adapting and Implementing Innovative Materials in Statistics Courses (AIMS)*. Poster presented at the Joint Mathematics Meetings, San Diego, CA.
- [12] Rodriguez, M., & Zieffler, A. (2007, November). *Measurement that supports assessment for learning*. Invited Web seminar for the Consortium for the Advancement of Undergraduate Statistics Education (CAUSE), The Ohio State University, Columbus, OH.
- [11] Zieffler, A., Garfield, J., & delMas, R. (2007, August). *Studying the role of simulation in developing students' statistical reasoning*. Invited presentation at the 56th Session of the International Statistical Institute (ISI), Lisbon, Portugal.
- [10] Zieffler, A., Garfield, J., delMas, R., & Gould, R. (2007, August). *Studying the development of college students' informal reasoning about statistical inference*. Presentation at the 5th Statistical Reasoning, Thinking and Literacy (SRTL) Research Forum, Coventry, England.
- [9] Zieffler, A., & Everson, M. (2007, May). *GAISE 2007: A statistics odyssey*. Invited presentation at the United States Conference on Teaching Statistics, Columbus, OH.
- [8] Zieffler, A., & Garfield, J. (2007, April). *Modeling the growth of students' covariational reasoning during an introductory statistics course*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- [7] Zieffler, A. (2007, March). *Conducting classroom research in statistics education: Issues, challenges and examples*. Invited Web seminar presented for the Consortium for the Advancement of Undergraduate Statistics Education (CAUSE), The Ohio State University, Columbus, OH.

- [6] Garfield, J., delMas, R., & Zieffler, A. (2006, September). *Adapting and Implementing Innovative Materials in Statistics (AIMS): Developing lessons aligned with GAISE*. Presentation at Stat Chat, Macalester College, St. Paul, MN.
- [5] Zieffler, A. (2006, August). *Conducting classroom research and writing a dissertation: Lessons learned about statistics education research*. Invited paper presented at the Joint Statistical Meetings, Seattle, WA.
- [4] Zieffler, A. (2005, August). *Using GAISE to create a better introductory statistics course*. Paper presented at the Joint Statistical Meetings, Minneapolis, MN.
- [3] Zieffler, A. (2005, July). *Correlation is not causation: Instructor perceptions of student understanding & misconceptions in bivariate data*. Poster presented at the United States Conference on Teaching Statistics, Columbus, OH.
- [2] Zieffler, A. (2005, July). *Correlation is not causation: Instructor perceptions of student understanding & misconceptions in bivariate data*. Poster presented at The Fourth International Research Forum on Statistical Reasoning, Thinking, and Literacy, Auckland, New Zealand.
- [1] Zieffler, A. (2001, June). *Using the TI-83 calculator to create fractals*. Paper presented at the Saint Cloud State University Fractals & Chaos Workshop, Saint Cloud, MN.

External Research Funding

Defining the quantitative and computational skills of incoming science students. A Science Education Program Award to Macalester College as a lead institution for a collaboration between Bryn Mawr, Oberlin, St. Olaf, Lewis and Clark, Harvey Mudd, Claremont-McKenna Colleges, and the University of Minnesota. Howard Hughes Medical Initiative funded 2013–2016, \$250,000, Overvoorde, P. (PI). Grant # 520076788.

Collaborative Research: Evaluation and assessment of teaching and learning about statistics (e-ATLAS). National Science Foundation funded June 1, 2011–May 31, 2013, \$91,970, Garfield, J., Pearl, D., delMas, R., & Zieffler, A. (PIs).

Collaborative research: The CATALST project, Change Agents for Teaching and Learning Statistics. National Science Foundation funded August 2008–July 2011, \$299,974, Garfield, J., delMas, R., & Zieffler, A. (PIs). DUE-0814433.

National statistics teaching practice survey: Instrument development. National Science Foundation funded July 2008–June 2011, \$71,887, Garfield, J., delMas, R., & Zieffler, A. (PIs). DUE-0808862.

Internal Research Funding

CATALST e-textbook. CEHD Incentive Funds, Summer 2012, Zieffler, A.

Validation study of assessments of statistical learning outcomes. Indirect Cost Recovery Award, March 2011, Garfield, J., delMas, R., & Zieffler, A.

Developing materials to propose a national center for evaluation of statistics curriculum projects. Indirect Cost Recovery Award, Summer 2010, Zieffler, A., Garfield, J., & delMas, R.

Developing materials to propose a national center for evaluation of statistics curriculum projects. Indirect Cost Recovery Award, Summer 2010, Zieffler, A., Garfield, J., & delMas, R.

Adapting the Statistics Teaching Inventory for online or hybrid classes. Indirect Cost Recovery Award, Summer 2010, Everson, M., delMas, R., Zieffler, A., Garfield, J.

Evaluation Projects

Transforming data into knowledge: Curricular innovations in the era of big data. A Science Education Program Award to Macalester College, Howard Hughes Medical Initiative funded September, 2012–August, 2016, \$1,300,000, P. Overvoorde (PI and Program Director). Grant # 5007550. Grant evaluator.

CCLI Phase II: Building a Community around modeling, statistics, computation, and calculus. National Science Foundation funded December 2009–November 2012, \$424,185, D. Kaplan (PI). DUE-0920350. Grant evaluation team.

Creating a teaching and learning infrastructure for introductory statistics redesign. National Science Foundation funded July 2008–June 2010, \$142,615, R. Gould (PI). DUE-0737126. Grant evaluation team.

Collaborative Research: INCIST: Improving National acceptance of computationally intensive statistical techniques. National Science Foundation funded September 2009–August 2012, \$350,000, W. West and R. Woodard (PIs). DUE-0817397. Grant evaluation team.

Rational number project: Instructional module for fractions, decimals and percents. National Science Foundation funded October 2006 – September 2009, \$554,418, K. Cramer & T. Wyberg (PIs). DUE-0628005. Grant evaluator.

Editorial Service

- 2012–Current **Co-Editor**, *Technology Innovations in Statistics Education*.
- 2010–2012 **Associate Editor**, *Journal of Statistics Education*.
- Ongoing **Journal Reviewer**, *The American Statistician*; *Applied Psychological Methods*; *Educational Researcher*; *Journal of Engineering Education*; *Journal of Statistics Education*; *PLOS ONE*; *Statistics Education Research Journal*; *Technology Innovations in Statistics Education*.

Service to the Department, College, and University

- 2017 **Representative**, *Graduate Advisory Committee, Department of Educational Psychology*.
- 2014–Current **Faculty Coordinator**, *College in the Schools, University of Minnesota*.
- 2014–2016 **Selection Committee**, *Outstanding Contributions to Postbaccalaureate, Graduate, and Professional Education, University of Minnesota*.
- 2013–2014 **Selection Committee**, *Morse Alumni Undergraduate Teaching Award, University of Minnesota*.
- 2011–2014 **Representative**, *CEHD Curriculum Committee*.
- 2012 **Representative**, *University of Minnesota Senate*.
- 2013–Current **Alternate Representative**, *University Senate, University of Minnesota*.

Service to the Profession

- 2017 **External Reviewer**, *Statistics and Data Sciences Program, St. Olaf College*.
- 2016–2018 **Committee Member**, *Envisioning the Data Science Discipline: The Undergraduate Perspective Study, National Academies of Sciences, Engineering, and Medicine*.
- 2012–2013 **Chair**, *Special Interest Group on Statistics Education, Mathematical Association of America*.
- 2011–2012; 2013–2014 **Executive Committee**, *Special Interest Group on Statistics Education, Mathematical Association of America*.
- 2007–Current **Research Advisory Board Member**, *Consortium for the Advancement of Undergraduate Statistics Education*.
- 2013–2014 **Session Organizer**, *9th International Conference on Teaching Statistics*.
- 2013 **Scientific Committee**, *The International Collaboration for Research on Statistical Reasoning, Thinking, and Literacy (SRTL-8)*.
- 2007 **Conference Referee**, *IASE/ICMI Joint Study Conference*.
- 2009 **Conference Referee**, *8th International Conference on Teaching Statistics*.
- 2011 **Grant Reviewer**, *Social Sciences and Humanities Research Council, Canada*.