25 April 2025

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APPOINTMENTS

2024 – **Senior Fellow**, Spencer Foundation

2023 – **Professor of Statistics and Data Science**
Professor (*by courtesy*), School of Education and Social Policy

2018 – 2023 Associate Professor of Statistics (with tenure)
Associate Professor (by courtesy) of Human Development and Social Policy, School of Education and Social Policy
Northwestern University

2019 – **Co-Director**
Statistics for Evidence Based Policy and Practice (STEPP) Center
Northwestern University

2018 – **Faculty Fellow, Institute for Policy Research**
Northwestern University

2017 – 2018 Associate Professor of Applied Statistics (with tenure)
2011 – 2017 Assistant Professor of Applied Statistics
Teachers College, Columbia University

EDUCATION

2011 **Ph.D. Statistics**, **Northwestern University**
Certificate in Education Science

2005 **M.A. Sociology, University of Chicago**

2001 **B.A. Mathematics, Transylvania University** (*summa cum laude*)

1999 Semester abroad, University College Dublin, Ireland

FELLOWSHIPS AND AWARDS

2025 **Elected Member**, National Academy of Education

2025	**Senior Visiting Fellowship**, International Center for Advanced Study, Università degli Studi di Palermo. Palermo, Italy. January 2025.
2024 – 2025	**Academic Leadership Program**, Provost's Office, Northwestern University (1 of 5 faculty selected from the university)
2024	**Highly Cited Researcher** (1 in 1,000), Clarivate Web of Science
2024	**Must-Read Article Award**, Learning Disability Quarterly, Council for Learning Disabilities
2024	**Fellow**, American Statistical Association
2024	**Fellow**, American Educational Research Association
2024	**Top Scholar – Lifetime, Propensity Score Matching**. Top 0.5% of Scholars Worldwide. ScholarGPS.
2023	**Highly Cited Researcher** (1 in 1,000), Clarivate Web of Science
2020	**Frederick Mosteller Award**, The Campbell Collaboration
2020	**Best Publication Award**, Behavioral Science and Policy Association
2019 – 2020	**Senior Fellow**, Spencer Foundation
2017	**Anne Anastasi Distinguished Early Career Award**, American Psychological Association – Division 5 (Quantitative Research Methods)
2017	**Early Career Award**, Society for Research Synthesis Methods
2017	**Elected Member***, Society for Research Synthesis Methods (**membership limited to 85 researchers*)
2016	**Early Career Award for Quantitative Research Methodology** (given every three years), American Education Research Association – Division D
2015	**Outstanding Reviewer Award**, Journal of Educational and Behavioral Statistics
2014	**George A. Miller Award** for an Outstanding Recent Article in General Psychology, Division 1 (Society for General Psychology), American Psychological Association

2012 **Outstanding Reviewer Award**, Journal of Educational and Behavioral Statistics

2011 **Outstanding Reviewer Award**, Journal of Educational and Behavioral Statistics

2007 – 2010 **Pre-doctoral Fellowship**, Institute for Education Science

2001 – 2003 **Graduate Fellowship**, University of Chicago

1997 – 2001 **President's Scholarship**, Transylvania University

1997 – 2001 **Robert C. Byrd Honors Scholarship**

EDITORIAL APPOINTMENTS

2018 – 2022 Associate Editor, *Journal of Educational and Behavioral Statistics*
2023 – Editorial Board, *AERA Open*
2018 – 2024 Editorial Board, *Observational Studies*
2017 – Editorial Board, *Research Synthesis Methods*
2014 – 2024 Editorial Board, *Psychological Bulletin*
2014 – Editorial Board, *Journal of Research on Educational Effectiveness*
2013 – Editorial Board, *Journal of Educational and Behavioral Statistics*
2017 – 2020 Editorial Board, *Review of Educational Research*

GRANT FUNDING

Active External Grants

2025 – 2028 **Principal Investigator**, Developing and Evaluating Tools for Communicating Statistical Evidence to Education Decision-Makers, with Katie Fitzgerald (Co-PI) and Alex Kale (Co-PI). Institute of Education Sciences (Statistical Methods). $899,696.

2024 – 2029 **Principal Investigator**, Evaluation of 'A culturally responsive project-based learning intervention in secondary science in Alabama and North Carolina' (PI: Barbara Schneider, Michigan State University). Funding: EIR, US Department of Education. $1,500,000.

2023 – 2028 **Co-Investigator.** Precise Prediction and Treatment of Seizures After Intracranial Hemorrhage, with Andrew Naidech (PI), David Cella (Co-I), Yuan Luo (Co-I), and Stephan Schuele (Co-I). National Institute of Neurological Disorders and Stroke. Award Number: 1R01NS117608-01A1. Funding: $3,905,393.

2024 – 2027 **Co-Principal Investigator**. A Summer RCT Institute for Established Researchers. Institute of Education Sciences (Training Grant), with Larry Hedges (PI). Award number: R305B240008. Funding: $799,925.

2022 – 2025 **Co-Principal Investigator**. Meta-Analysis Training Institute. Institute of Education Sciences (Training Grant), with Terri Pigott (PI), Tasha Beretvas (co-PI). Award number: R305B220007. Funding: $799,999.

2019 – 2025 **Co-Principal Investigator**. Promoting Best Practices in the Synthesis in Educational Research. Yidan Foundation, with Larry Hedges (PI). Funding: $2,000,000.

2019 – 2025 **Co-Principal Investigator**. Improving Evaluations of R&D in STEM Education. National Science Foundation (Training Grant), with Larry Hedges (PI). Award number: 1937719. Funding: $822,720.

Previous External Grants

2021 – 2024 **Co-Principal Investigator**. A Summer RCT Institute for Established Researchers. Institute of Education Sciences (Training Grant), with Larry Hedges (PI), and Spyros Konstantopoulos (co-PI). Award number: R305B200029. Funding: $799,999.

2020 – 2024 **Co-Principal Investigator.** What We Have Learned in 20 Years of IES Randomized Trials. Institute of Education Sciences, with Larry Hedges (PI). Award number: R305U200005. Funding: $931,060.

2019 – 2023 **Co-Principal Investigator**. Modern Meta-Analysis Research Institute. National Science Foundation (Training Grant), with Terri Pigott (PI), Josh Polanin (co-PI), and Ryan Williams (co-PI). Award number: 1937633. Funding: $850,000.

2019 – 2023 **Co-Principal Investigator**. Planning Randomized Controlled Trials in Community Colleges. Institute of Education Sciences (Statistical Methods), with Michael Weiss (PI). Award Number: R305D190025. Funding: $898,302

2017 – 2022 **Co-Principal Investigator**. Meta-Analysis Training Institute. Institute of Education Sciences (Training Grant), with Terri Pigott (PI), Tasha Beretvas (co-PI), Josh Polanin (co-PI), and Ryan Williams (co-PI). Award number: R305B170019. Funding: $797,760.

2017 – 2022 **Principal Investigator**. A User-Friendly Tool for Designing Cluster Randomized Trials with Power and Relevance. Institute of Education Sciences (Statistical Methods), with Jessaca Spybrook (co-PI). Award number: R305D170024. Funding: $893,737.

2016 – 2020 **Co-Principal Investigator**, Systemic Transformation of Inquiry Learning Environments for STEM (STILE 2.0). National Science Foundation (EHR-DRL), with Ellen Meier (PI). Funding: $2,700,000.

2017 – 2018 **Co-Investigator,** A Pilot Study Exploring the Effects of School Transformation and Redesign of Cafeterias (STARCafé), Robert Wood Johnson Foundation, with Pamela Koch (PI), Randi Wolf (co-PI), and Isobel Contento (co-I). Funding: $74,803.

2017 – 2018 **Co-Principal Investigator**, The Nature and Reproducibility of Mindset Effects across Diverse Contexts. Raikes Foundation, with Mesmin Destin (PI), David Yeager (co-PI) and Stephanie Fryberg (co-PI). Funding: $67,775.

2011 – 2016 **Co-Principal Investigator**, Improving the Generalizability of Findings from Educational Evaluations. NSF Promoting Research and Innovation in Methodologies for Evaluation (PRIME), with Larry V. Hedges (PI). Funding: $998,109.

2014 – 2017 **Principal Investigator**, Developing a Web-tool for Increasing the Generalizability of Large-Scale Educational Evaluations. Spencer Foundation (#201500057), with Larry V. Hedges (co-PI). Funding: $493,048.

Previous Internal Grants

2016 – 2017 **Principal Investigator**, Development of Software to Implement Small-Sample Corrections to Cluster Robust Standard Errors. Dean's Non-Competitive Grant for Pre-tenure Faculty. Funding: $2,500.

2016 – 2017 **Co-Principal Investigator**, Nutrition Choices for Infants: An Academic Review. Dean's Non-Competitive Grant for Pre-tenure Faculty, with Sonali Rajan (PI). Funding: $2,500.

2015 – 2016 **Principal Investigator,** Teaching Assistants and Multiple Lab Sections: A New Model for Improving Student Outcomes in Core Statistics Courses. Provost Investment Fund, Teachers College, with Matthew Johnson (co-PI) and Bryan Keller (co-PI). Funding: $20,000.

MEDIA AND POPULAR PRESS

2025 Cutting research funding would make education less effective efficient. Commentary for the Brookings Institution (w/ Cara Jackson, Daphna Bassok, Beth Boulay, Michal Kurlaender, and Lindsay Page). February 24, 2025.

2025 Episode of a *Professor and a Comedian Walk* into a Bar podcast.

2023 Interviewed for article in CNBC Make-it on growth mindset.

2023 Interview (first half) about growth mindset and meta-analysis. Two Pint PLC (Podcast)

2023 Interview (second half) about regression to the mean. Choicology with Katy Milkman (Podcast)

2023 Interviewed for the article 'The Divider (article about Jo Boaler)' in The Chronicle of Higher Education.

2022 Interview (full episode) about growth mindset and meta-analysis. Talking about Kids (Podcast)

2022 The value of variation: Why we need to attend to heterogeneity in intervention research. Blogpost for Stanford Public Scholarship Collaborative. (w/ C. Conaway, A. Artiles)

2015 Interviewed for the article 'Test-Refusal Movement's Success Hampers Analysis of New York State Exam Results' in The New York Times.

PUBLICATIONS

* *indicates student co-author*

In press Spake, R., Jackson, E., Bullock, J., Gardner, E., **Tipton, E.**, Grainger, M., & Doncaster, P. Precision ecology for targeted conservation action. Forthcoming in *Nature Ecology and Evolution*.

2025 **Fitzgerald, K.* & **Tipton, E.** Using Extant Data to Improve Estimation of the Standardized Mean Difference. *Journal of Educational and Behavioral Statistics*, 50(1), 128–148. https://doi.org/10.3102/10769986241238478

2025 Fitzgerald, K., **Khella, D.*, **Charles, A.*, & **Tipton, E**. Meta-Analytic Rain Cloud Plots: Improving Evidence Communication Through Data Visualization Design Principles. Forthcoming in *Research Synthesis Methods*. https://doi.org/10.1017/rsm.2025.4

2024 Conaway, C., **Tipton, E.,** & Artiles, A. (2024) The value of variation: Embracing heterogeneity in intervention research. *Teachers College Record, 126*(8), 107–116. https://doi.org/10.1177/01614681241276956

2024 **Hou, Z.* & **Tipton, E.** Enhancing Recall in Automated Record Screening: A Resampling Algorithm. *Research Synthesis Methods*, 15(3): 372–383. https://doi.org/10.1002/jrsm.1690

2024 **Fitzgerald, K. G.*, & **Tipton, E.** A Knowledge Mobilization Framework: Toward Evidence-Based Statistical Communication Practices in Education

Research. *Journal of Research on Educational Effectiveness*, 1–21. https://doi.org/10.1080/19345747.2023.2209082

2023 Park, S., Lee, Y. R., Nelson, G., & **Tipton, E.** Four Best Practices for Meta-Analysis: A Systematic Review of Methodological Rigor in Mathematics Interventions for Students with or at Risk of Disabilities. *Learning Disability Quarterly*. *47*(4), 234–246. https://doi.org/10.1177/07319487231185133
** Recipient of the 2024 LDQ Must-Read Article Award by the Council for Learning Disabilities*

2023 **Tipton, E.**, Bryan, C., Murray, J., McDaniel, M. A., Schneider, B., & Yeager, D. S. Why meta-analyses of growth mindset and other interventions should follow best practices for examining heterogeneity: Commentary on Macnamara and Burgoyne (2023) and Burnette et al. (2023). *Psychological Bulletin*, *149*(3–4), 229 241. https://doi.org/10.1037/bul0000384

2023 Bediou, B., **Rodgers, M. A.*, **Tipton, E.**, Mayer, R. E., Green, C. S., & Bavelier, D. Effects of Action Video Game Play on Cognitive Skills: A Meta-Analysis. *Technology, Mind, and Behavior, 4*(1: Spring 2023). https://doi.org/10.1037/TMB0000102

2023 Hedges, L. V., Tipton, E., Zejnullahi, R. & Diaz, K. G. Effect sizes in ANCOVA and difference-in-differences designs. *British Journal of Mathematical and Statistical Psychology*, 76, 259–282. https://doi.org/10.1111/bmsp.12296

2023 Kale, A., Lee, S., Goan, T., **Tipton, E**., & Hullman, J. MetaExplorer: Facilitating Reasoning with Epistemic Uncertainty in Meta-analysis. ACM Conference on Human Factors in Computing Systems (Proc. CHI). *arXiv:2302.04739*. https://doi.org/10.1145/3544548.3580869

2023 Pustejovsky, J. E. & **Tipton, E.** (2023). Corrigendum: Small sample methods for cluster-robust variance estimation and hypothesis testing in fixed effects models. *Journal of Business & Economic Statistics*, *41*(2), 650–652. https://doi.org/10.1080/07350015.2023.2174123

2023 Scaffidi, M. A., Li, J., Genis, S., **Tipton, E.,** Khan, R., Pattni, C., Gimpaya, N., Bradley-Ridout, G., Walsh, C. M., & Grover, S. C. Accuracy of self-assessment in gastrointestinal endoscopy: a systematic review and meta-analysis. *Endoscopy*, *55*(2), 176–185. https://doi.org/10.1055/a-1929-1318

2022 Ferri Marini, C., Tadger, P., Chávez-Guevara, I. A., **Tipton, E.,** Meucci, M., Nikolovski, Z., Amaro-Gahete, F. J., & Peric, R. Factors Determining

the Agreement between Aerobic Threshold and Point of Maximal Fat Oxidation: Follow-Up on a Systematic Review and Meta-Analysis on Association. *International journal of environmental research and public health*, *20*(1), 453. https://doi.org/10.3390/ijerph20010453

2022 Szaszi, B., Higney, A., Charlton, A., Gelman, A., Ziano, I., Aczel, B., Goldstein, D. G., Yeager, D. S., & **Tipton, E.** No reason to expect large and consistent effects of nudge interventions. *Proceedings of the National Academy of Sciences of the United States of America*, *119*(31), https://doi.org/10.1073/pnas.2200732119

2022 Chevance, G., Golaszewski, N. M., **Tipton, E.,** Hekler, E. B., Buman, M., Welk, G. J., Patrick, K., & Godino, J. G. Accuracy and Precision of Energy Expenditure, Heart Rate, and Steps Measured by Combined-Sensing Fitbits Against Reference Measures: Systematic Review and Meta-analysis. *JMIR mHealth and uHealth*, *10*(4), e35626. https://doi.org/10.2196/35626

2022 Szaszi, B., Hajdu, N., Szecsi, P., **Tipton, E.,** & Aczel, B. A machine learning analysis of the relationship of demographics and social gathering attendance from 41 countries during pandemic. *Scientific reports*, *12*(1), 724. https://doi.org/10.1038/s41598-021-04305-5

2022 **Fitzgerald, K.* & **Tipton, E.** The Meta-Analytic Rain Cloud (MARC) plot: A new approach to visualizing clearinghouse data. *Journal of Research on Educational Effectiveness*.15:4, 848-875, https://doi.org/10.1080/19345747.2022.2031366

2022 Gamoran, A., Dibner, K., Alibali, M., Artiles, A., Coburn, C., Cohen-Vogel, L., Jones, N.D., Long, B.T., Ming, N.C., Murphy, M.C., Patton-Terry, N.S., Plass, J.L., Schwartz, N., Scott, J., **Tipton, E.**, & Vaughn, S. National Academies of Sciences, Engineering, and Medicine. (2022) *The Future of Education Research at IES: Advancing an Equity-Oriented Science*. Washington, DC: The National Academies Press. https://doi.org/10.17226/26428

2022 **Tipton, E.** Sample selection in randomized trials with multiple target populations. *American Journal of Evaluation*, *43*(1): 70–89. https://doi.org/10.1177/1098214020927787

2022 Pustejovsky, J. & **Tipton, E**. Meta-analysis with robust variance estimation: Expanding the range of working models. *Prevention Science*, 23: 425–438. https://doi.org/10.1007/s11121-021-01246-3

2021 Koch, P., Wolf, R., Trent, R., Ang, I., Dallefeld, M., **Tipton, E.**, Gray, H., Guerra, L., & Di Noia, J. Wellness in the Schools: A Lunch and Recess

Intervention Increases Fruit and Vegetable Consumption. *Nutrients*, 13(9). https://doi.org/10.3390/nu13093085

2021 Bryan, C., **Tipton, E.**, & Yeager, D. Behavioral science is unlikely to change the world without a heterogeneity revolution. *Nature Human Behavior, 5, 980–989*. https://doi.org/10.1038/s41562-021-01143-3

2021 **Tipton, E**. Beyond Generalization of the ATE: Designing Randomized Trials to Understand Treatment Effect Heterogeneity. *Journal of the Royal Statistics Society: Series A*, 184(2): 504–521. https://doi.org/10.1111/rssa.12629

2021 **Tipton, E.**, Spybrook, J., **Fitzgerald, K., *Wang, Q., & *Davidson, C.* Towards a System of Evidence for All: Current Practices and Future Opportunities in 37 Randomized Trials. *Educational Researcher*, 50(3): 145–156. https://doi.org/10.3102/0013189x20960686

2021 Conway, A.W., Bittner, M., Phan, D., Kamboj, N., Chang, K., **Tipton, E.** & Parotto, M. Accuracy and precision of zero-heat-flux temperature measurements with the 3MTM Bair HuggerTM Temperature Monitoring System: A systematic review and meta-analysis. *Journal of Clinical Monitoring and Computing*, 35, 39–49. https://doi.org/10.1007/s10877-020-00543-6

2020 Kowalski, S., Taylor, J., Askinas, K., **Wang, Q., *Zhang, Q.*, Maddix, W., & **Tipton, E.** Examining Factors Contributing to Variation in Effect Size Estimates of Teacher Outcomes from Studies of Science Teacher Professional Development. *Journal of Research on Educational Effectiveness*, 1–29. https://doi.org/10.1080/19345747.2020.1726538

2020 Pinto, D., Prabhakaran, S., **Tipton, E.**, & Naidech, A. Why Physicians Prescribe Prophylactic Seizure Medications After Intracerebral Hemorrhage: An Adaptive Conjoint Analysis. *Journal of Stroke and Cerebrovascular Diseases*, *29*(4). https://doi.org/10.1016/j.jstrokecerebrovasdis.2019.104628

2019 **Tipton, E.** & Matlen, B. Improved Generalizability Through Improved Recruitment: Lessons Learned from a Large-Scale Randomized Trial. *American Journal of Evaluation, 40*(3), 414–430. https://doi.org/10.1177/1098214018810519

2019 **Tipton, E.,** Yeager, D., Schneider, B., & Iachan, R. Designing probability samples to identify sources of treatment effect heterogeneity. Chapter in *Experimental Methods in Survey Research: Techniques that Combine Random Sampling with Random Assignment* (Editor: Lavrakas, P.J.) New York, NY: Wiley. https://doi.org/10.1002/9781119083771.ch22

2019 Yeager, D., Hanselman, P., Walton, G., Murray, J., Crosnoe, R., Muller, C., **Tipton, E.**, Schneider, B., Hullemon, C., **Hinojosa, C.*, Paunesku, D., Romero, C., Flint, K., Roberts, A., Trott, J., Iachan, R., Buontempo, J., **Hooper, S.*, Murray, J., Carvalho, C., Hahn, R., Gopalan, M., Mhatre, M., Ferguson, R., Duckworth, A. & Dweck, C. A National Experiment Reveals Where a Growth Mindset Improves Achievement. *Nature*, *573*(7774), 364–369. https://doi.org/10.1038/s41586-019-1466-y
**Recipient of the 2020 Best Publication Award from the Behavioral Science and Policy Association*

2019 **Tipton, E**., Pustejovsky, J., & **Ahmadi, H*. A History of Meta-Regression: Technical, Conceptual, and Practical Developments between 1974 and 2018. *Research Synthesis Methods*, 10(2): 161–179. https://doi.org/10.1002/jrsm.1338

2019 **Tipton, E**., Pustejovsky, J., & **Ahmadi, H*. Current Practices in Meta-Regression in Psychology, Education, and Medicine. *Research Synthesis Methods*, 10(2): 180–194. https://doi.org/10.1002/jrsm.1339

2019 Green, C.S., Bavelier, D., Ansorge, U., Ball, K., Bingel, U., Chien, J., Colzato, L., Edwards, J., Facoetti, A., Gazzaley, A., Gathercole, S., Ghisletta, P., Gori, S., Granic, I., Hillman, C., Hommel, B., Jaeggi, S., Kanske, P., Karbach, J., Kingstone, A., Kliegel, M., Klingberg, T., Kuhn, S., Levi, D., Mayer, R., McLaughlin, A., McNamra, D., Morris, M., Nahum, M., Newcombe, N., Panizzuttti, R., Prakash, R., Rizzo, S., Schubert, S., Seitz, A., Short, S., Singh, I., Slotta, J., Strobach, T., Thomas, M., **Tipton, E.**, Tong, X., Vlach, H., Wetherell, J., Wexler, A., Witt, C. Improving methodological standards in behavioral interventions for cognitive enhancement. *Journal of Cognitive Enhancement*, 3(1): 2–29. https://doi.org/10.1007/s41465-018-0115-y

2019 Conway, A., **Tipton, E.,** Liu, W., Conway, Z., Soalheira, K., Sutherland, J., & Fingleton, Accuracy and precision of transcutaneous carbon dioxide monitoring: a systematic review and meta-analysis. *Thorax*, *74*(2), 157–163. https://doi.org/10.1136/thoraxjnl-2017-211466

2019 **Ang, I.*, Wolf, R., Koch, P., Gray, H., **Trent, R.*, **Tipton, E**., & Contento, I. School lunch environmental factors impacting fruit and vegetable consumption. *Journal of Nutrition Education and Behavior*, 51(1): 68–79. https://doi.org/10.1016/j.jneb.2018.08.012

2019 Destin, M., Hanselman, P., Buontempo, J., **Tipton, E.**, & Yeager, D. Do Student Mindsets Differ by Socioeconomic Status and Explain Disparities in Academic Achievement in the United States? *AERA Open*, 5(2): 1–12. https://doi.org/10.1177/2332858419857706

2018 **Tipton, E.** & Olsen, R. A review of statistical methods for generalizing from evaluations of educational interventions. *Educational Researcher*, 47(8): 516–524. https://doi.org/10.3102/0013189x18781522

2018 Pustejovsky, J. & **Tipton, E**. Small sample methods for cluster-robust variance estimation and hypothesis testing in fixed effects models. *Journal of Business and Economic Statistics*, *36*(4): 672–683. https://doi.org/10.1080/07350015.2016.1247004

2018 Taylor, J.A., Kowalski, S.M., Polanin, J.R., Stuhlsatz, M.A., Wilson, C.D., **Tipton, E.**, & Wilson, S.J. Investigating science education intervention effect sizes for a priori power analyses**.** *AERA Open,4*(3). https://doi.org/10.1177/2332858418791991

2018 Bediou, B., Adams, D.M., Mayer, R.E., **Tipton, E.**, Green, C.S., & Bavelier, D. Meta-analysis of action video game impact on perceptual, attentional, and cognitive skills. *Psychological Bulletin*, *144*(1): 77–110. https://doi.org/10.1037/bul0000130

2017 **Tipton, E.** & Hedges, L.V. The role of the sample in estimating and explaining treatment effect variation: A commentary on three papers. *Journal of Research on Educational Effectiveness*. 10(4): 903–906. https://doi.org/10.1080/19345747.2017.1364563

2017 **Tipton, E.**, Hallberg, K., Hedges, L.V., & Chan, W. Implications of small samples for generalization: Adjustments and rules of thumb**.** *Evaluation Review* (Special Issue: External Validity 2), *41*(5): 472–505. https://doi.org/10.1177/0193841x16655665

2017 **Tipton, E.** & Shuster, J.J. A framework for the meta-analysis of Bland-Altman studies based on a limits of agreement approach. *Statistics in Medicine*, *36*(23), 3621–3635. https://doi.org/10.1002/sim.7352

2017 **Tipton, E.** & Peck, L. A Design-based approach to improve external validity in welfare policy evaluations. *Evaluation Review* (Special Issue: External Validity 1), *41*(4): 326–356. https://doi.org/10.1177/0193841x16655656

2017 Taylor, J., Roth, K., Wilson, C., Stuhlsatz, M., & **Tipton, E.** The effect of an analysis-of-practice, videocase-based teacher professional development program on elementary students' science achievement. *Journal of Research on Educational Effectiveness*, 10(2): 241–271. https://doi.org/10.1080/19345747.2016.1147628

2017 **Burgermaster, M.*, Gray, H.L., **Tipton, E.**, Contento, I., & Koch, P. Testing an integrated model of program implementation: the "Food, Health, and Choices" school-based childhood obesity prevention intervention process evaluation. *Prevention Science*, 18: 71–82. https://psycnet.apa.org/doi/10.1007/s11121-016-0736-2

2017 **Burgermaster, M.*, **Bhana, H.*, **Fullwood, M.D.*, **Luna Bazaldua, D. A.*, & **Tipton, E**. Exploring the role of sugar sweetened beverage consumption in obesity among New Yorkers using propensity score matching. *Journal of the Academy of Nutrition and Dietetics*. *117*(5), 753–762. https://doi.org/10.1016/j.jand.2017.01.022
*This paper grew out of a final project in my HUDM 5133 Causal Inference course.

2016 Tanner-Smith, E., **Tipton, E.**, & Polanin, J. Handling Complex Meta-Analytic Data Structures using Robust Variance Estimates: A Tutorial in R. *Journal of Developmental and Life-Course Criminology*, 2(1): 85–112. https://doi.org/10.1007/s40865-016-0026-5

2016 **Tipton, E.**, **Fellers, L.*, Caverly, S., Vaden-Kiernan, M., Borman, G., Sullivan, K., & Ruiz de Castilla, V. Site selection in experiments: A follow-up evaluation of site recruitment in two scale-up studies. *Journal of Research on Educational Effectiveness*, *9*(sup1): 209–228. https://doi.org/10.1080/19345747.2015.1105895

2016 Keller, B. & **Tipton, E.** Propensity Score Analysis in R: A Software Review. *Journal of Educational and Behavioral Statistics*, *41*(3): 326–348. https://doi.org/10.3102/1076998616631744

2016 Gray, H., **Burgermaster, M.*, **Tipton, E**., M., DiNoia, J., Koch, P. & Contento, I. Intraclass correlation coefficients for obesity indicators and energy balance related behaviors among New York City public elementary schools. *Health Education & Behavior*, *43*(2): 172–181. https://doi.org/10.1177/1090198115598987

2015 **Tipton, E.** & Pustejovsky, J. Small-sample adjustments to multivariate hypothesis tests in robust variance estimation in meta-regression. *Journal of Educational and Behavioral Statistics*, *40*(6): 604–634. https://doi.org/10.3102/1076998615606099

2015 **Mishra, A.*, **Rajappa, A.*, **Tipton, E.**, & Malandraki, G.A. The recline exercise: Comparisons with the head lift exercise in healthy adults. *Dysphagia*, *30*(6): 730–737. https://doi.org/10.1007/s00455-015-9651-0

2015 **Tipton, E.** Small sample adjustments for robust variance estimation with meta-regression. *Psychological Methods*, *20*(3): 375–393. https://psycnet.apa.org/doi/10.1037/met0000011

2014 **Tipton, E.** How generalizable is your experiment? Comparing a sample and population through a generalizability index. *Journal of Educational and Behavioral Statistics, 39*(6): 478–501. https://doi.org/10.3102/1076998614558486

2014 **Tipton, E.** Stratified sampling using cluster analysis: A sample selection strategy for improved generalizations from experiments. *Evaluation Review, 37*(2): 109–139. https://doi.org/10.1177/0193841X13516324

2014 **Tipton, E.**, Hedges, L.V., Vaden-Kiernan, M., Borman, G.D., Sullivan, K. & Caverly, S. Sample selection in randomized experiments: A new method using propensity score stratified sampling. *Journal of Research on Educational Effectiveness, 7*(1): 114–135. https://doi.org/10.1080/19345747.2013.831154

2014 Tanner-Smith, E. & **Tipton, E.** Robust variance estimation with dependent effect sizes: Practical considerations including a software tutorial in Stata and SPSS. *Research Synthesis Methods, 5*(1): 13–30. https://doi.org/10.1002/jrsm.1091

2013 **Tipton, E.** Robust variance estimation in meta-regression for binary dependent outcomes. *Research Synthesis Methods, 4*(2): 169–187. https://doi.org/10.1002/jrsm.1070

2013 **Tipton, E**. Improving generalizations from experiments using propensity score subclassification: Assumptions, properties, and contexts. *Journal of Educational and Behavioral Statistics, 38*: 239–266. https://doi.org/10.3102/1076998612441947

2013 Uttal, D.H., Meadow, N.G., **Tipton, E**., Hand, L.L., Alden, A.R., Warren, C., & Newcombe, N.S. The malleability of spatial skills: A meta-analysis of training studies. *Psychological Bulletin, 139*(2): 352–402. https://doi.org/10.1037/a0028446

**Recipient of 2014 George A. Miller Award for Outstanding Recent Article in General Psychology*

2012 de Vibe, M., Bjorndal, A., **Tipton, E**., Hammerstrom, K., & Kowalski, K. Mindfulness based stress reduction (MBSR) for improving health, quality of life and social functioning in adults. *Campbell Systematic Reviews, 2012:3.* https://doi.org/10.4073/csr.2012.3

2010 Hedges, L.V., **Tipton, E.**, and Johnson, M.C. Robust variance estimation in meta-regression with dependent effect size estimates. *Research Synthesis Methods*. 1(1): 39-65. Erratum in 1(2): 164–165. https://doi.org/10.1002/jrsm.5

UNDER REVIEW / WORKING PAPERS

2025 **Wu, W.*, Duan, J., Reed, W.R., & **Tipton, E**. What Can We Learn From 1000 Meta-Analyses Across 10 Different Disciplines? Working paper.

2024 **Forte, M.* & **Tipton, E.** Reconceiving meta-analysis from a finite population perspective. Revise & Resubmit.

2024 **Tipton, E.** & Patton-Terry, N. We need an "engineering of reading": Why a "science of reading" is not enough. Under review.

2024 **Tipton, E**. & **Mamakos, M.* Designing Randomized Experiments to Predict Unit-Specific Treatment Effects. Revise & Resubmit.

2023 **Hou, Z.* & **Tipton, E.** Record Screening Prioritization in Systematic Review and Meta-Analysis: A Systematic review. Under review.

2022 *Furman, G.**, Pustejovsky, J. & **Tipton, E.** Assessing sampling methods for generalization from multi-site randomized trials: Modeling recruitment and participation. Working paper.

WHITE PAPERS, REPORTS, BOOKS AND CHAPTERS

2023 Buckley, P. R., Cook, T.D., Elliott, D.S., Gardner, G., Gottfredson, D.C., Hawkins, J.D., Hedges, L.V., Murry, V.M., Tolan, P.H., **Tipton, E**., & Wadhwa, M. Does Hot Spots Policing Reduce Crime? An Alternative Interpretation Based on a Meta-Analysis of Randomized Experiments. Working paper. Retrieved from osf.io/6kjde.

2022 **Tipton, E.,** & Olsen, R. B. Enhancing the Generalizability of Impact Studies in Education. (NCEE 2022-003). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. Retrieved from http://ies.ed.gov/ncee.

2021 **Tipton, E.**, Hedges, L., Yeager, D., Murray, J., & Gopalan, M. Global mindset initiative paper 4: Research infrastructure and study design. Available at SSRN.

2021 Szaszi, B., Nandor, H., Komandi, K., & **Tipton, E**. Applying behavioral interventions in a new context. Chapter in *Behavioral Science in the Wild* (Edited by Mazar, N. & Soman, D.).

2021 **Tipton, E.** & Hartman, E. Generalizability and Transportability. Chapter in *Handbook of Multivariate Matching and Weighting* (Edited by Stuart, E., Rosenbaum, P., Small, D., & Zubizarreta, J.).

2021 **Tipton, E.**, Kuyper, A., Sass, D., & **Fitzgerald, K.* (Adapted from Ismay, C. & Kim, A.) Introduction to Statistics and Data Science: A moderndive into R and the tidyverse. https://nustat.github.io/intro-stat-data-sci/

2020 **Tipton, E.** A guide to quantitative research proposals. A guide for the Spencer Foundation. Available at: https://www.spencer.org/resources/a-guide-to-quantitative-research-proposals

2020 Hedges, L. & **Tipton, E.** Addressing the challenges to educational research posed by COVID-19. Institute for Policy Research Working Paper (WP-20-47). Available at https://www.ipr.northwestern.edu/our-work/working-papers/2020/wp-20-47.html.

2018 Roschelle, J., **Tipton, E.**, Shechtman, N., Vahey., P. Generalizability of a Dynamic Representations Intervention to Enhance Conceptual Understanding in Mathematics. (SimCalc Technical Report 10). Menlo Park, CA: SRI International.

2010 Hedges, L. V. & **Tipton, E.** Meta-analysis. In A. Steptoe (Ed.) *The handbook of behavioral medicine*. London: Springer-Verlag.

SOFTWARE

2022 *Ruel, T.*, Chao, B.*,* Ackerman, B. & **Tipton, E**. generalizeR: An R package for generalizations from causal studies.

2017 Tyszler, M., Pustejovsky, J.E., & **Tipton, E.** REG_SANDWICH: Stata module to compute cluster-robust (sandwich) variance estimators with small-sample corrections for linear regression, Statistical Software Components S458352, Boston College Department of Economics. URL: https://ideas.repec.org/c/boc/bocode/s458352.html

2017 Hedberg, E., Pustejovsky, J. & **Tipton, E.** robumeta: A macro for Stata.

2015 **Tipton, E.** & Miller, K. The Generalizer. Found at http://www.thegeneralizer.org.

2013 **Fisher, Z.* & **Tipton, E.**, & **Hou, Z.* robumeta: An R-package for robust variance estimation in meta-analysis. `arXiv: 1503.02220 [stat.ME]`

INVITED KEYNOTES AND TALKS

2025 Fireside Chat. (passcode WiDS2025!) Virtu's Women in Data Science Virtual Conference. Online. February 2025.

2025 Introduction to impact evaluation. Invited talk at the Università degli Studi di Palermo. Palermo, Italy. January 2025.

2024 The value of variation: Embracing heterogeneity in intervention research. Invited talk at the UChicago Inclusive Economy Lab. Chicago, IL. October 2024.

2024 Developing an evidence-base when treatment effects vary. Keynote at The Dyslexia Foundation's 20th Extraordinary Brain Series. Villetta, Malta. June 2024.

2024 Integrating diverse evidence: from science to policy-making. Keynote at CLeaR (Causal Learning and Reasoning) Conference. UCLA. April 2024.

2024 Designing randomized trials to predict treatment effects. Invited talk at the Online Causal Inference Seminar hosted by Stanford University. January 2024.

2023 On disseminating evidence and mobilizing knowledge. Invited talk at the Science Scripts and Contestations Workshop. Berlin Social Science Center, WZB. December 2023.

2023 Generalizability and heterogeneity: Designing your study when treatment effects vary. Invited talk at ICERM Hot Topics Workshop: Extending Inference to a New Target Population. Brown University. November 2023.

2023 Integrating diverse evidence: from science to policy-making. Invited talk at the Social Psychology Brownbag. Northwestern University. November 2023.

2023 Generalizability and heterogeneity: Designing your study when treatment effects vary. Invited talk at the Joint Quantitative Methods Brownbag. (Online) October 2023.

2023 Integrating diverse evidence: from science to policy-making. Keynote at the Perspectives on AI Symposium "Beyond Deep Learning: Learning from Small and Heterogeneous Data" at the Idiap Research Institute. Martigny, Switzerland. July 2023.

2023 Modern meta-analysis: We need to talk about heterogeneity. Invited talk at the Institute for Policy Research, Northwestern University. May 2023.

2023 Designing experiments to predict unit treatment effects. Invited presentation at the Conference on External Validity at the Institute for Advanced Study in Toulouse (IAST). Toulouse, France. April 2023.

2022 Anticipating, analyzing, and addressing challenges to the excellence of the research enterprise. Invited panelist (w/ David Allison, Sarah Chu, Robert Pennock) at IFoRE, the annual meeting of Sigma Xi – the Scientific Research Honor Society. Washington DC. November 2022.

2022 Generalizability and heterogeneity: Designing your study when treatment effects vary. Invited talk at the Ann Arbor Section of the American Statistical Association. (Online) September 2022.

2022 Heterogeneity and Implementation. Invited panelist at The Future is Now: Advancing and Sustaining an Equity-Oriented Science Symposium. The National Academies of Science, Engineering, and Medicine. Washington, DC. September 2022.

2022 Developing an evidence base when treatment effects vary. Keynote at the International Meeting of the Psychometric Society (IMPS). Bologna, Italy. July 2022.

2022 The Future of Education Research at IES: A National Academy of Science consensus study report. Invited talks representing the committee at:

- American Education Research Association Conference, San Diego, CA, April 2022
- Congressional Briefing, House and Senate Committees (Online) May 2022
- LEARN Deans (Online) June 2022
- Results for America (Online) June 2022
- Knowledge Alliance (Online) June 2022
- NASEM Board of Science Education (BOSE) Meeting, Washington DC, June 2022
- Spencer Foundation Board Meeting, October 2022
- Pacific Coast Research Conference, February 2023

2022 Enhancing the generalizability of impact study evaluations: An IES guide. Invited talks on the new IES Generalizability guide at:

- Teachers College, Columbia University, May 2022
- Society for Research on Educational Effectiveness (Webinar), May 2022
- University of Kentucky (Online) June 2022
- University of Texas at Austin (Online) June 2022
- University of Michigan (Online) June 2022
- Howard University (Online) June 2022
- Society for Research on Educational Effectiveness (SREE) Workshop, Washington DC, September 2022
- Michigan State (Online) October 2022
- Association for Policy and Management (APPAM) Session, Washington DC, November 2022

2021 Designing RCTs for evidence-based decision making. Invited talk at the Seminar on Political Methodology, Columbia University (Online). February 2021.

2021 Increasing robustness to distribution shifts by improving design. Invited talk at 'Distribution shifts: Connecting methods and applications' workshop at NeuroIPS conference (Online). December 2021.

2021 Generalizability and heterogeneity: Designing your study when treatment effects vary. Invited talk at the Graduate School of Education at the University of Pennsylvania. November 2021.

2021 Causal generalizations: Building connections between science and policy. Invited talk (and workshop) at the Nebraska Academy for Methodology, Analytics, and Psychometrics. University of Nebraska – Lincoln. November 2021.

2021 When you don't know the covariance: Combining model based and robust standard errors. Invited talk at the Biostatistics Department, School of Public Health, Brown University. October 2021.

2021 Using generalization to improve the accuracy of education studies. Invited talk at the Quantitative Methodology Center at the Ohio State University (Online). October 2021.

2021 A conversation about the future of education research (with B. Nosak). Invited keynote at the Evaluators' Conference hosted by the Educational Endowment Foundation (Online). June 2021.

2021 Designing randomized trials to understand treatment effect heterogeneity. Invited talk at Yale Political Science Seminar (Online). April 2021.

2020 The role of sampling and recruitment in improving the policy relevance of RCTs. Invited talk at the World Bank (Online). December 2020.

2020 Designing randomized trials to understand treatment effect heterogeneity. Invited talk at Yale Biostatistics (Online). November 2020.

2020 Causality and generalizability: What we can learn from surveys. Invited talk at the Office of Planning, Research, & Evaluation at the Office of the Administration for Children & Families (Online). July 2020.

2020 Will this Intervention Work in this Population? Designing Randomized Trials for Generalization (with A. Gelman as Discussant). Invited talk at

the Online Causal Inference Seminar hosted by Stanford University (Online Recording). April 2020.

2020 RCT designs for causal generalization. Invited talk at the Conference on Multilevel Regression and Poststratification hosted by Departments of Statistics and Political Science and Institute for Social and Economic Research and Policy at Columbia University (Online). April 2020.

2020 Where do the results generalize? (with V. Wong, L. Martinez, M. Feng, & J. Spybrook). Invited session at the Institute of Education Sciences Principal Investigators Meeting. Washington, DC. January 2020.

2019 Evidence on evidence. Invited talk at Making Evidence Synthesis More Useful, Usable, and Used Meeting, Gates Foundation. Washington, DC. October 2019.

2019 The role of sampling and recruitment in improving the policy relevance of RCTs. Invited talk at Shirley Ryan's Learning for Life Lectures, Northwestern University. Evanston, IL. September 2019.

2019 Assessing the relevance of IES funded Goal 3 and 4 studies to important policy populations. Invited talk at the Institute for Policy Research at Northwestern University. Evanston, IL. April 2019.

2019 The role of sampling and recruitment in improving the policy relevance of RCTs. Invited talk at the Workshop on Quantitative Research Methods in Education, Health, and Social Sciences (QMEHSS) at the University of Chicago. Chicago, IL. February 2019.

2019 Recruitment with a purpose: Designing RCTs with moderation and reporting in mind. Invited talk at the Department of Statistics, UCLA. Los Angeles, CA. February 2019.

2019 Where do the results generalize? Defining populations, developing recruitment strategies, and understanding heterogeneity in intervention research. Invited session at the Institute of Education Sciences Principal Investigators Meeting. Washington, DC. January 2019.

2019 Meta-analysis in education research (with T. Pigott, J. Polanin, & R. Williams). Invited session at the Institute of Education Sciences Principal Investigators Meeting. Washington, DC. January 2019.

2018 Designing RCTs to make generalizations and understand heterogeneity. Invited talk at Department of Math and Statistics, Arizona State University. Tempe, AZ. November 2018.

2018 Designing randomized trials with populations in mind. Invited Keynote at the LEAD Fall Retreat. Universität Tübingen, Germany. October 2018.

2018 Beyond the either-or: How multi-level models can improve cluster-robust methods (and vice versa). Invited Keynote at the Multi-Level Modeling Special Interest Group (MLM-SIG) at the Annual Meeting of the American Education Research Association. New York, NY. April 2018.

2018 From the lab to the real world: Methods to get you there. Invited talk at Eötvös Loránd University, Institute of Psychology. Budapest, Hungary. April 2018.

2018 Making data publicly available. Invited member of panel at the Institute of Education Sciences Annual Principal Investigators Meeting. Washington, DC. January 2018.

2017 Indexing similarity: A new metric for group comparisons. Invited talk at the Department of Statistics and Data Sciences at the University of Texas at Austin. Austin, TX. December 2017.

2017 From the lab to the real world: Methods to get you there. Invited talk at Neuroscape Lab at UCSF. San Francisco, CA. October 2017.

2017 The Generalizer: Designing for and Assessing Generalizability in Education Trials. Invited talk at Abt Associates for "External Validity Day." Bethesda, MD, August 2017.

2017 How generalizable is your experiment? Indexing the representativeness of causal findings to target populations. Invited talk at the Journal of Educational and Behavioral Statistics sponsored session. Joint Statistical Meetings. Baltimore, MD. July 2017.

2017 Designing randomized trials for making generalizations to policy-relevant populations. Talk in invited session on generalizability. Annual Meeting of the International Society for Business and Industrial Statistics (ISBIS). IBM T.J. Watson Research Center, NY. June 2017.

2017 What will it take to do effectiveness research? Invited talk at the NSF meeting, "Behavioral Interventions to Enhance Cognition: Toward a Consensus on Methods". Boston, MA. May 2017.

2017 Clustering your standard errors: Small sample problems in meta-regression. Invited talk at the Columbia University Causal Inference Conference (on Treatment Effect Variation) sponsored by the Statistics Department. New York, NY. May 2017.

2017 What's the point of a randomized trial? Designing studies with generalizability in mind. Invited talk at the Institute for Policy Research, Northwestern University. Evanston, IL. April 2017.

2017 Where do the results of your study generalize? An index for comparing samples and populations. Invited talk at the Statistics Department, Northwestern University. Evanston, IL. April 2017.

2017 What's the point of a randomized trial? Designing studies with generalizability in mind. Invited talk at the Harvard Graduate School of Education Interdisciplinary Colloquium. Cambridge, MA. April 2017.

2017 Designing randomized trials for making generalizations to policy-relevant populations. Invited talk at the Quantitative Methods Brown Bag, University of Texas at Austin. Austin, TX. January 2017.

2017 Designing randomized trials for making generalizations to policy-relevant populations. Invited talk at the Division of Biostatistics in the Department of Psychiatry Colloquium, Columbia University. New York, NY. January 2017.

2016 Data science in education: What works, for whom, where, and why? Invited talk at the Data Science Institute, Columbia University. New York, NY. December 2016.

2016 Designing randomized trials for making generalizations to policy-relevant populations. Invited talk at the Psychometrics Colloquium, Fordham University. New York, NY. November 2016.

2016 Designing randomized trials for making generalizations to policy-relevant populations. Invited talk at the Statistics Department, Northwestern University. Evanston, IL. October 2016.

2016 New considerations for experimental design. Invited talk at Fall Meeting of the Mindset Scholars Network. Seattle, WA. October 2016.

2016 Small sample methods for cluster-robust variance estimation and hypothesis testing in fixed effects model. Invited talk at the Econometrics Workshop at Rutgers University Economics Department. New Brunswick, NJ. September 2016.

2016 Building generalizations: Tools for increasing the relevance of findings from experimental studies in education. Invited talk at University of Wisconsin at Madison's Predoctoral Interdisciplinary Research Training Program. Madison, WI. September 2016.

2016 Making generalizations to NYC schools: How to thoughtfully choose schools for your next study. Invited talk at the NYC Department of Education Analytics Club. New York, NY. June 2016.

2016 Building generalizations: Tools for increasing the relevance of cost-benefit study results. Invited talk at the Center for Benefit-Cost Studies at Teachers College. New York, NY. April 2016.

2016 Small sample adjustments to F-tests for cluster robust standard errors. Invited talk at Columbia University's Economics in Education Joint Seminar. New York, NY. February 2016.

2016 Small sample adjustments to F-tests for cluster robust standard errors. Invited talk at the NYU PRIISM Center. New York, NY. January 2016.

2015 Building generalizations: Tools for increasing the relevance of your results. Invited talk at the Institute for Education Sciences Principal Investigators Meeting. Washington, DC. December 2015.

2015 Building generalizations: Tools for increasing the relevance of your results. Invited talk at MDRC. New York, NY. October 2015.

2015 Building generalizations: Tools for increasing the relevance of your results. Invited talk at American Institute for Research. Chicago, IL. July 2015.

2014 Selecting samples for improved causal generalizations. Invited talk at the Principles of External Validity for Systematic Evidence Reviews Meeting, Office of Planning, Research, and Evaluation. Washington, DC. May 2014.

2014 Planning for generalizations from your experiment: Designing a strategic sample selection and recruitment plan with representativeness in mind. Invited talk at Abt Associates. Bethesda, MD. March 2014.

2014 Improving generalizations from large-scale experiments: New methods (with L. Hedges). Invited briefing at the Institute of Education Sciences. Washington, DC. January 2014.

2013 Does your program work? A brief tour of methods for causal inference. Invited talk at Reasoning Mind. Houston, TX. April 2013.

2012 Planning your *Bully* experiment: Some validity concerns and solutions. Invited talk at the Harmony Institute. New York, NY. September 2012.

2011 Sample selection in randomized experiments: A new method using propensity score stratified sampling. Invited talk at the Quantitative Methods in Social Sciences program, Columbia University. New York NY. December 2011.

2010 A new approach for improving the external validity of social experiments (with L. Hedges). Invited talk at the Center for Technology and Learning, SRI International. Menlo Park, CA. November 2010.

CONFERENCE PRESENTATIONS

2023 Treatment effect heterogeneity: What it means for your study. Presented at INFORMS (Institute for Operations Research and Management Sciences) Annual Meeting. Phoenix, AZ. October 2023.

2023 Designing studies to predict treatment effects (w/ M. Mamakos). Paper presented at the annual meeting of the Society for Research on Educational Effectiveness. Washington, DC. September 2023.

2023 The future of statistics in education research: Recommendations from 3 National Academies reports (w/ L. Hedges, J. Buckley). Invited paper session at the Joint Statistical Meetings. Toronto, Canada. August 2023.

2021 Increase sample heterogeneity to improve the robustness of causal effect estimates. Paper presented at the Joint Statistical Meetings. Online. August 2021.

2019 Your sample matters as much as your intervention. Paper presented at the Annual Meeting of the Society for Experimental Psychology. Toronto, Canada. October 2019.

2019 Assessing the relevance of IES funded Goal 3 and 4 studies to important policy populations. Paper presented at the Annual Meeting of the Society for Research on Educational Effectiveness. Washington, DC. March 2019.

2018 Meta-analysis in education: Past, present, & future (with J. Pustejovsky & H. Ahmadi). Paper presented at the Annual Meeting of the American Education Research Association. New York, NY. April 2018.

2018 Improved generalizability through improved recruitment: Lessons learned from a large-scale randomized trial (with B. Matlen). Poster presented at the Annual Meeting of the Society for Research on Educational Effectiveness. Washington, DC. March 2018.

2016 Robust variance estimation in meta-regression: Adjustments for small and moderate sample sizes (with J. Pustejovsky). Presented at the Annual

Meeting of the American Statistical Association. Chicago, IL. August 2016.

2016 Developing a theory of treatment effect heterogeneity through better design: Where do behavioral science interventions work best? (with D. Yeager, B. Schneider, and R. Iachan). Paper presented at the Spring Meeting of the Society for Research on Educational Effectiveness. Washington, DC. March 2016.

2015 Planning for generalization with stratified selection: Design parameters and sample size requirements for use in power analysis. Paper presented at the Annual Meeting of the Association for Public Policy Analysis and Management. Miami, FL. November 2015.

2015 Mind your g's and t's: Designing an experiment for generalization and developing a theory of treatment effect heterogeneity (with D. Yeager, B. Schneider, R. Iachan). Paper presented at Randomized Control Trials in the Social Sciences Conference. York, England. September 2015.

2015 Small-Sample Adjustments for Tests of Moderators and Model Fit in Robust Variance Estimation in Meta-Regression (with J. Pustejovsky). Paper presented at the Annual Meeting of the American Educational Research Association. Chicago, IL. April 2015.

2015 Small-Sample Adjustments for Tests of Moderators and Model Fit in Robust Variance Estimation in Meta-Regression (with J. Pustejovsky). Paper presented at the Spring Meeting of the Society for Research on Educational Effectiveness. Washington, DC. March 2015.

2015 Implications of small samples for generalization: Adjustments and rules of thumb (with K. Hallberg & W. Chan). Paper presented at the Spring Meeting of the Society for Research on Educational Effectiveness. Washington, DC. March 2015.

2015 Site Selection in Experiments: A Follow-Up Evaluation of Site Recruitment in Two Scale-Up Studies (with S. Caverly & L. Fellers). Paper presented at the Spring Meeting of the Society for Research on Educational Effectiveness. Washington, DC, March 2015.

2014 A design-based approach to improve external validity in welfare policy evaluations (with L. Peck). Paper presented at the annual Welfare Research and Evaluation Conference. Washington, DC. May 2014.

2014 Synthesizing results from replication studies using robust variance estimation: Corrections when the number of studies is small. Paper

presented at the Spring Meeting of the Society for Research on Educational Effectiveness. Washington, DC. March 2014.

2013 What can your sample do? Aligning your sample selection strategy with the goal of your study. Paper presented at the Annual Meeting of the Association for Public Policy Analysis and Management. Washington, DC. November 2013.

2013 How generalizable is your experiment? Developing an index for comparing samples and populations. Poster presented at the Spring Meeting of the Society for Research on Educational Effectiveness. Washington, DC. March 2013.

2012 Selecting a sample for your experiment: A non-random stratified sampling approach. Paper presented at the Annual Conference for the Society for Research on Educational Effectiveness. Washington, DC. March 2012.

2011 A prospective method for sample selection to improve generalizations from randomized experiments. Paper presented at the Annual Meeting of the Association for Public Policy Analysis and Management. Washington, DC. November 2011.

2011 Designing a sample selection plan to improve generalizations from two scale-up experiments (with K. Sullivan, L. Hedges, M. Vaden-Kiernan, G. Borman, and S. Caverly). Paper presented at the Fall Meeting of the Society for Research on Educational Effectiveness. Washington, DC. September 2011.

2011 Mindfulness Based Stress Reduction: Using robust standard errors in a meta-analysis. (with A. Bjorndal) Paper presented at the Campbell Collaboration Joint Symposium on Evidence-Based Policy, George Mason University, Fairfax VA. August 2011.

2011 Using propensity scores to improve generalizations from randomized experiments. Paper presented at the Annual Conference for the American Education Research Association. New Orleans, LA. April 2011.

2011 Using propensity score subclassification to improve generalizations from randomized experiments. Paper presented at the Annual Conference for the Society for Research on Educational Effectiveness. Washington, DC. March 2011.

2010 New results for robust standard errors. Paper presented at the Annual Meeting for the Society for Research Synthesis Methods. Cartagena, Spain. July 2010.

2010 Heterogeneity of treatment effects: Modeling the distribution of individual treatment effects. Poster presented at the Annual Institute of Education Sciences Research Conference. Washington, DC. June 2010.

2010 Two perspectives on the generalizability of lessons from scaling up SimCalc (with J. Roschelle, D. Tatar, and L. Hedges). Paper presented at the Annual meeting of the Society for Research Synthesis Methods. Washington, DC. March 2010.

2009 Generalization from randomized experiments: A new use for the propensity score. Poster presented at the Annual Institute of Education Sciences Research Conference. Washington, DC. June 2009.

TEACHING & ADVISING

**Courses I proposed and developed.*

Northwestern University
STAT 202: Introduction to Statistics (Fall 2018, 2019, 2020)
STAT 328: Causal Inference (Winters 2020, 2021, 2022, 2023)
STAT 519: Responsible Conduct of Research Training (Winter 2019, 2020, 2021, 2022, 2023, 2024)
*STAT 353: Advanced Regression (Spring 2022, Winter 2023, 2024)
*STAT 429: Meta-Analysis (Winter 2024)

Teachers College, Columbia University
HUDM 5122: Applied Regression Analysis (2011 – 2017)
*HUDM 5126: Linear Models and Regression Analysis (Fall 2013, 2014, 2015)
*HUDM 5130: Meta-Analysis (2013, 2015, 2017)
*HUDM 5133: Causal Inference for Program Evaluation (2014)
*HUDM 5250: Statistical Careers, Communication, and Capstone (2016 – 2017)

Invited lectures at other universities / courses:
April 2023 AERA-NSF Grants Program capstone workshop
May 2022 Causal Inference course (Erin Hartman, UC-Berkeley)
April 2017 Leadership Salon (TC Student Senate)
April 2016 Professoriate Workshop (TC Student Senate)
May 2015 Summer Workshop on College Teaching (TC Student Senate)
2014 - 2022 Statistical Communication course (Andrew Gelman, Columbia University)
2014, 2015 Causal Inference course (Jose Zubizaretta, Columbia Business School)

Current Doctoral Students (Northwestern)
~2025 Kayla Schroeder

~2026 Matt Forte
Daihe Sui

Dissertation Committees – Sponsor (Northwestern)

2024 Judy Zhang (PhD in Statistics and Data Science)

2023 Thomas Ippolito (Co-Sponsored w/ Larry Hedges; PhD Statistics)

2023 Zhipeng Hou (PhD in Statistics)

2021 Katie Fitzgerald (PhD in Statistics)

Dissertation Committees – Member (Northwestern)

2024 Sarah Moore (PhD in Political Science)

2023 Michalis Mamakos (PhD in Computer Science)

2021 Sarah Peko-Spicer (PhD in Statistics)

2021 Rrita Zejnullahi (PhD in Statistics)

Dissertation Committees – Sponsor (Teachers College, Columbia University)

2021 Karina Yanez-Diaz (PhD in Measurement and Evaluation)

2019 Hedyeh Ahmadi (PhD in Measurement and Evaluation)

2016 Lauren Fellers (PhD in Measurement and Evaluation)
Sukhminder Kaur (EdD in Health Education)

2014 Katharine Conn (PhD in Economics in Education)

Dissertation Committees – Member (Teachers College, Columbia University)

2019 Tom Weishaar (EdD in Health Education), Magdalena Bennett (PhD in Economics of Education)

2017 Zhongqi Shi (PhD in Cognitive Psychology), Peggy Loo (PhD in Counseling Psychology), Matthew Graziose (PhD in Nutrition Education), Ian Ang (PhD in Nutrition Education), Yoko Kodaira (PhD in School Psychology), Aasha Foster (PhD in Counseling Psychology), Ama Awotwi (PhD in Cognitive Studies in Education).

2016 Jing Li (PhD in Economics in Education), Gemma Moya Gale (PhD in Speech and Language Pathology), Maria Ofelia Clarissa Z. San Pedro (PhD in Cognitive Studies in Education), Carissa Chambers (PhD in Counseling Psychology), Sarah Zoogman (PhD in Clinical Psychology), Kathleen Thomson (PhD in Education Policy Studies).

2015 Nicole Zillmer (PhD in Cognitive Studies in Education), Min Cheng (PhD in Counseling Psychology), Pyong Kim (PhD in Cognitive Studies in

Education), Jenny Kao (PhD in Developmental Psychology), Marissa Burgermaster (PhD in Nutrition Education).

2014 Kathleen Farrell (EdD in Health Education), Lisa Pao (PhD in Developmental Psychology), Sunbong Kim (PhD in Cognitive Studies in Education), Valerie Khait (PhD in Developmental Psychology), Laura Cordisco Tsai (PhD in Social Work, School of Social Work).

2013 Jessica Marini (PhD in Measurement and Evaluation), Selen Turkay, (PhD in Instructional Technology and Media), Emma Garcia (PhD in Economics in Education).

2012 Ryan Williams (PhD in Research Methodology, Loyola University Chicago).

PROFESSIONAL SERVICE

Leadership

2024 – 2026 **President-Elect/ President/ Past President**, Society for Research on Educational Effectiveness

2024 – 2026 **Chair-Elect/Chair/Past Chair**, Social Statistics Section, American Statistical Association

2021 – 2023 **Treasurer / Secretary**, Social Statistics Section, American Statistical Association

2022 – 2024 **Board Member**, Blueprints for Healthy Youth Development

2020 – **Board Member**, Society for Research on Educational Effectiveness (SREE)

2019 – 2022 **Member**, Character Lab Research Network Scientific Advisory Council

2018 – 2022 **Member**, STAT Advisory Board to WWC SWAT, AIR.

2011 – 2018 **Affiliated Faculty**, Columbia Population Research Center
GSAS Faculty-at-large, Columbia University

Conference Program Committees and Leadership

2024 **co-Chair**, *NSF Education Core Research (ECR) PI Meeting*

2022 **Organizer** (w/ P. Buhlmann, J. Duchi, B. Yu), Hot Topics: Foundations of Stable, Generalizable and Transferable Statistical Learning, *Mathematical Sciences Research Institute* (MSRI)

2022 **co-Chair**, Annual Meeting of the *American Education Research Association* (AERA)

2019 **Program Committee** (w/ Russ Steele & Dylan Small), *Atlantic Causal Inference Conference* (ACIC) at McGill University

2019 **Selection Committee**, Early Career Award (Quantitative Methods), Division D, American Education Research Association (AERA)

2019 **co-Chair** (w/ Joy Lesnick), Annual Meeting of the *Society for Research on Educational Effectiveness* (SREE)

2019 **co-Chair**, *Institute of Education Sciences Principal Investigators Meeting*

2018 **Program Committee**, Methods Section, *Association for Public Policy Analysis and Management* (APPAM)

2018 **Research Methods Chair**, Annual Meeting of the *Society for Research on Educational Effectiveness* (SREE)

2017 **Program Committee**, Columbia University, *Workshop on Causal Inference*

2016 **Program Committee**, *Atlantic Causal Inference Conference* (ACIC) at New York University

2014 – 2019 **Founding Board Member**, Women in Quantitative Methods (within the Society of Research on Educational Effectiveness)

2016 – 2018 **Program Co-Chair**, *Systematic Review and Meta-Analysis* SIG, AERA

Ad-hoc Referee Service

Journals: *American Journal of Epidemiology*; *Advances in Methods and Practices in Psychological Science; Annals of Applied Statistics; AERA Open; Behavior Research Methods; Campbell Collaboration Systematic Reviews; Clinical Trials; Communications in Statistics – Theory and Methods; Developmental Psychology; Educational Evaluation and Policy Analysis; Educational Psychologist; Education Researcher; Epidemiology; Evaluation Review; Health Education & Behavior; Journal of Applied Statistics; Journal of Biopharmaceutical Statistics; Journal of the Society for Social Work and Research; Journal of the American Statistical Association; Journal of Cognitive Enhancement; Journal of Educational and Behavioral Statistics; Journal of Policy Analysis and Management; Journal of Research on Educational Effectiveness; Journal of the Royal Statistical Society; Journal of Survey Statistics and Methodology; Nature Human Behavior; Oxford Bulletin of Economics and*

Statistics; Prevention Science; Psychological Bulletin; Psychological Methods; PNAS; Research Synthesis Methods; Sociology of Education; Statistics in Medicine; The Elementary School Journal.

Books/Other: *BERA/SAGE Handbook of Education Research; Routledge; Sage; What Works Clearinghouse Standards* (2016); *Institute for Education Sciences Publications.*

Conferences: *Methods Section, Association for Public Policy and Management; Methods Section, Society for Research on Educational Effectiveness; Meta-analysis SIG, American Education Research Association.*

Funders: *National Science Foundation EHR; REESE.*
Institute of Education Sciences, Social and Behavioral Panel (Ad hoc reviewer, 2016; Principal Member of Panel, 2017 – 2019); Statistics and Methods Panel (2024).

Professional Society Membership

American Education Research Association (AERA)
Association for Public Policy Analysis and Management (APPAM)
American Statistical Association (ASA)
Society for Research on Educational Effectiveness (SREE)
Society for Research Synthesis Methods (SRSM)
Society for Causal Inference (SCI)

Study Design, Sampling, and Recruitment Consulting

2022 National Replication Study of the Effects of Self-Affirmation on Black and Latinx Students' Academic, Disciplinary, and Socio-Emotional Outcomes in Different School Settings (PI Jason Snipes, WestEd). IES Replication Efficacy. ***Target Population:*** *Schools serving Black and Hispanic students in the United States.* ***Sample selection:*** *Purposive (cluster analysis defined strata).*

2019 The Early Math Initiative: Scaling an Innovative Intervention to Prepare Children for Elementary School Mathematics (PI Prentice Starkey, WestEd). Department of Education, Office of Innovation & Improvement (Funded 2019). ***Target Population***: *Head Start and State Pre-K Sites serving low-income children in the continental US.* ***Sample selection:*** *Combined purposive and probability (cluster analysis defined strata).*

2017 Efficacy of ASSISTments Online Homework Support for Middle School Mathematics Learning: A Replication Study (PI Mingyu Feng, SRI International). IES Efficacy and Replication (Funded 2017). ***Target Population***: *Public middle schools in North Carolina.* ***Sample selection:*** *Purposive (cluster analysis defined strata).*

2017 Evaluating the Effectiveness of ASSISTments for Improving Math Achievement (PI Kirk Walters, AIR). IES Effectiveness (Funded 2017). ***Target Population***: *Public middle schools in the US.* ***Sample selection:*** *Purposive (cluster analysis defined strata).*

2016 The Scale-Up of PACT: Examining the Effectiveness of a Content-Area Reading Comprehension Intervention (PI Greg Roberts, University of Texas – Austin). IES Scale Up (Funded 2016). ***Target Population***: *Public schools teaching US History in 8th grade in the continental US.* ***Sample selection:*** *Purposive (cluster analysis defined strata).*

2015 An Efficacy Study of Online Mathematics Homework Support: An Evaluation of the ASSISTments Formative Assessment and Tutoring Platform (PI Jeremy Roschelle, SRI International). IES Efficacy and Replication (Funded 2012). ***Target Population***: *Public middle schools in Maine.* ***Sample selection:*** *Purposive (cluster analysis defined strata).*

2015 Efficacy of an Integrated Digital Elementary School Mathematics Curriculum (PI Jeremy Roschelle, SRI International). IES Efficacy and Replication (Funded 2013). ***Target Population***: *Public elementary schools in West Virginia.* ***Sample selection:*** *Purposive (cluster analysis defined strata).*

2015 Khan Academy Resources for Maximizing Mathematics Achievement: A Postsecondary Mathematics Efficacy Study (PI Steve Schneider, WestEd). IES Postsecondary and Adult Education (Funded 2014). ***Target Population***: *Community Colleges in California.* ***Sample selection:*** *Purposive (cluster-analysis defined strata).*

2015 National Study of Learning Mindsets (PI David Yeager, University of Texas – Austin). ***Target Population***: *9th graders in public high schools in the US.* ***Sample selection:*** *Probability sample.*

2011 – 2014 Effectiveness Studies of Open Court Reading and Everyday Mathematics (IES Goal 4; PIs: Geoffrey Borman & Michael Vaden-Kiernan), SEDL/AIR. ***Target Population***: *Schools likely to use the OCR or EM curriculum in the US.* ***Sample selection:*** *Purposive (propensity score defined strata).*

(Other) Advisory Boards and Technical Working Groups

2023 – 2026 *Advisory Board,* Selective Reporting Bias (IES Grant; PI: Martyna Citkowicz)

2022 – 2025 *Advisory Board*, Gender Bias in STEM (NSF Grant; PI: David Miller)

2021 – 2024 *TWG member*, SEERNet (IES grant; PI: Jeremy Roschelle)

2020 – 2023 *TWG member*, Elementary Science Review (NSF grant; PI: Robert Slavin, Amanda Inns)

2020 – 2023 *TWG member*, Timing and Effects of English Learner Reclassification: A Systematic Review and Meta-Analysis (IES grant; PI: Molly Faulkner-Bond)

2018 – 2021 *TWG Member*, Evaluation of Striving Readers Comprehensive Literacy (AIR)

2017 *Working Group Member*, Inclusion Across the Lifespan Meeting, National Institute for Health. Washington, DC.

2017 – 2020 *TWG Member*, TextEd Project (NCEE Post-secondary evaluation; PI Lindsay Page), Washington, DC.

2015 – 2019 *TWG Member*, Improving Children's Understanding of Mathematical Equivalence: An Efficacy Study (IES Goal 3; PI Jodi Davenport), WestEd.

2015 – 2019 *TWG Member*, Building Students' Understanding of Energy in High School Biology (IES Development Grant; PI Jo Ellen Roseman), American Association for the Advancement of Science.

2015 – 2023 *TWG Member*, The Spatial Foundation of Symbolic Numeracy Skills in Young Children (NSF CAREER; PI Elizabeth Gunderson), Temple University.

2014 – 2018 *TWG Member*, Graphing Calculators in the Classroom (IES Goal 3; PI: Steve Schneider), WestEd.

2014 – 2015 *Member*, What Works Clearinghouse (WWC) Baseline Equivalence Panel (Chair: Jeff Valentine).

2012 – 2015 *TWG Member*, Teaching Perceptual and Conceptual Processes in Graph Interpretation (NSF; PIs: David Uttal & Priti Shah), Northwestern University.

2011 *Invitee*, Exploring the Uses of Data Captured from Adaptive Educational Technologies, National Academy of Education, Washington, D.C.

Workshops

Workshops on Generalization

2022 **Workshop on Generalization.** Pre-conference 3-hour workshop at the Annual Meeting of the Society for Research on Educational Effectiveness. Washington, DC.

2021 **Introduction to "The Generalizer".** Invited 3-hour workshop at the University of Nebraska-Lincoln.

2019 **Introduction to "The Generalizer".** Invited 2-hour workshop for graduate students at University of Pittsburgh.

2016 **Introduction to "The Generalizer": A new webtool for improving generalizations from experiments**. Invited ½-day Workshop, Spring Meeting of the Society for Research on Educational Effectiveness. Washington, DC. March 2016. (Recorded and available for free online on their website).

2014 **Improving Generalizations from Experiments: New Methods** (with L. Hedges) ½-day Workshop, Annual Meeting of the American Education Research Association. Philadelphia, PA. (To be available online through the Virtual Research Learning Center: http://bit.ly/1h4jtVe). April 2014.

2013 **Improving Generalizations from Experiments: New Methods** (with L. Hedges) Invited ½-day Workshop. Fall Meeting, Society for Research on Educational Effectiveness. Washington, DC. , September 2013.

Workshops on Meta-Analysis

2023 **Meta-analysis when effects vary** (w/ T. Pigott). Invited 4-hour workshop at the Annual Meeting of the Association for Psychological Science. Washington, DC.

2021 **Advanced meta-analysis and meta-regression.** Invited 3-hour workshop at the University of Nebraska-Lincoln.

2019 **Advanced Meta-Analysis Methods.** (w/ T. Pigott, R. Williams, & J. Polanin). Invited ½ day Workshop, Spring Meeting of the Society for Research on Educational Effectiveness. Washington, DC. March 2019. (Recorded and available for free online on their website).

2013 **Introduction to Meta-Analysis**. Invited 3-day Workshop, Curry School of Education, University of Virginia. July 2013

2011 **Using Robust Standard Errors for Dependent Effects** (with E. Tanner-Smith, M. Lipsey). 2-hour workshop, Campbell Collaboration Joint Symposium on Evidence-Based Policy. George Mason University. August 2011.

2010 **Meta-Regression with Dependent Effect Size Estimates** (with L. Hedges, M. Lipsey, and E. Tanner-Smith). 2-hour workshop, Joint Colloquium of the Cochrane-Campbell Collaboration. Keystone, CO. October 2010.

Other Workshops

2021 **Planning your survey experiment to detect treatment effect heterogeneity.** Invited 3-hour (online) workshop at the Annual Meeting of the American Association for Public Opinion Research.

2012 – **Hierarchical Linear Models Workshop**; **External Validity in RCTs**. 1-day workshop. IES Training Institute: Cluster Randomized Trials, Northwestern University.

Consulting

Research firms / Foundations / Etc.

American Institutes of Research (AIR); Character Lab (UPenn); BSCS; Consortium for Policy Research in Education (CPRE – Teachers College); Educational Development Corp (EDC); Lucas Foundation; Mathematica; MDRC; Spencer Foundation; SRI; WestEd.

Northwestern Service (Statistics Department)

2021 – 2022 Member, Graduate Admissions Committee
2020 – 2024 Member, Graduate Curriculum Committee
2020 – 2021 Member, BS+MS Program Committee
2019 – 2024 Program Director, Ad Hoc MS in Applied Statistics degree
2019 – 2024 Instructor, STAT 519: Responsible Conduct of Research course

Northwestern Service (WCAS)

2022 – 2023 Ad Hoc Tenure Committee
2020 – 2021 Open Rank Search Committee, Department of Mathematics
2018 – 2019 Ad Hoc Tenure Committee
2019 – 2024 Weinberg Curriculum Review Committee

Northwestern Service (University)

2024 Data Science + AI Steering Committee (WCAS Representative)
2023 – Executive Committee, Institute for Policy Research
2023 – 2024 Mentor, Provosts Faculty Mentoring Program
2023 – 2024 Mentor, Center for Effective Global Action

Teachers College Service

2016 – 2017 Program Director, Applied Statistics Program
2016 – 2017 Member, Affirmative Action Committee
2015 – 2017 Member, Faculty Salary Committee
2012 – 2015 Reviewer for Dean's Grant for Students

Search Committees (Teachers College)

2015 – 2016 Open Rank Search Committee, Economics of Education Program
2014 – 2015 Assistant Professor Search Committee, Education Policy Program
2011 – 2013 Assistant Professor Search Committee, Applied Statistics Program