

Nicholas J. Seewald

Curriculum Vitae

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Education

- Ph.D., Statistics. *Expected 2020*. University of Michigan, Ann Arbor, MI, USA
- 2018 M.A., Statistics. University of Michigan, Ann Arbor, MI, USA
- 2015 M.S., Biostatistics. University of Michigan, Ann Arbor, MI, USA
- 2013 B.S., Mathematics with Life Science, *cum laude*. University of Notre Dame, Notre Dame, IN, USA

Publications

Peer-Reviewed

1. **Seewald, N.J.**, Kidwell, K.M., Wu, T., Nahum-Shani, I., Almirall, D. (2020) “Sample size considerations for comparing dynamic treatment regimens in a sequential multiple-assignment randomized trial with a continuous longitudinal outcome.” *Statistical Methods in Medical Research*, 29:7, 1891-1912.
2. **Seewald, N.J.**, Smith, S.N., Lee, A.J., Klasnja, P., Murphy, S.A. (2019) “Practical Considerations for Data Collection and Management in Mobile Health Micro-randomized Trials.” *Statistics in Biosciences*, 11:2, 355-370.
3. Klasnja, P., Smith, S., **Seewald, N. J.**, Lee, A., Hall, K., Luers, B., Heckler, E., Murphy, S. A. (2018), “Efficacy of contextually-tailored suggestions for physical activity: A micro-randomized trial of HeartSteps.” *Annals of Behavioral Medicine*, 53:6, 573-582.
4. Kidwell, K. M., **Seewald, N. J.**, Tran, Q., Kasari, K., Almirall, D. (2018), “Design and Analysis Considerations for Comparing Dynamic Treatment Regimens with Binary Outcomes from Sequential Multiple Assignment Randomized Trials.” *Journal of Applied Statistics*, 45:9, 1628-1651.
5. Meurer, W. J., **Seewald, N. J.**, Kidwell, K. M. (2017), “Sequential Multiple Assignment Randomized Trials: An Opportunity for Improved Design of Stroke Reperfusion Trials.” *Journal of Stroke and Cerebrovascular Diseases*, 26:4, 717-724.

6. Kadakia, K.C., Kidwell, K.M., **Seewald, N.J.**, Snyder, C.F., Storniolo, A.M., Otte, J.L., Flockhart, D.A., Hayes, D.F., Stearns, V., Henry, N.L. (2017), "Prospective assessment of patient-reported outcomes and estradiol and drug concentrations in patients experiencing toxicity from adjuvant aromatase inhibitors." *Breast Cancer Research and Treatment*, 164, 411-419.
7. Hertz, D. L., Kidwell, K. M., **Seewald, N. J.**, Gersch, C.L., Desta, Z., Flockhart, D.A., Storniolo, A-M., Stearns, V., Skaar, T.C., Hayes, D.F., Henry, N.L., and Rae, J. M. (2016), "Polymorphisms in Drug-Metabolizing Enzymes and Steady-State Exemestane Concentration in Postmenopausal Patients with Breast Cancer." *The Pharmacogenomics Journal*, 17, 521-527.
8. Kadakia, K. C., Snyder, C. F., Kidwell, K. M., **Seewald, N. J.**, Flockhart, D.A., Skaar, T.C., Desta, Z., Rae, J.M., Otte, J.L., Carpenter, J.S., Storniolo, A.M., Hayes, D.F., Stearns, V., Henry, N. L. (2016), "Patient-Reported Outcomes and Early Discontinuation in Aromatase Inhibitor-Treated Postmenopausal Women With Early Stage Breast Cancer." *The Oncologist*, 21:5, 539-546.
9. Hertz, D. L., Caram, M. V., Kidwell, K. M., Thibert, J. N., Gersch, C., **Seewald, N. J.**, Smerage, J., Rubenfire, M., Henry, N.L., Cooney, K.A., Leja, M., Griggs, J.J., and Rae, J.M. (2016), "Evidence for association of SNPs in ABCB1 and CBR3, but not RAC2, NCF4, SLC28A3 or TOP2B, with chronic cardiotoxicity in a cohort of breast cancer patients treated with anthracyclines." *Pharmacogenomics*, 17, 231-240.
10. Randolph, A. H., **Seewald, N. J.**, Rickert, K. and Brown, S. N. (2013), "Tris (3, 5-di-tert-butylcatecholato) molybdenum (VI): Lewis acidity and nonclassical oxygen atom transfer reactions." *Inorganic Chemistry*, 52:21, 12587-12598.
11. Marshall-Roth, T., Liebscher, S. C., Rickert, K., **Seewald, N. J.**, Oliver, A. G. and Brown, S. N. (2012), "Nonclassical oxygen atom transfer reactions of oxomolybdenum(vi) bis(catecholate)." *Chemical Communications*, 48, 7826-7828.

Book Chapters

1. Smith, S.N., Lee, A.J., Hall, K., **Seewald, N.J.**, Boruvka, A., Murphy, S.A., Klasnja, P. "Design lessons from a micro-randomized pilot study in mobile health" (2017). In *Mobile Health*, edited by J. Rehg, S.A. Murphy, and S. Kumar, 59-82. Cham: Springer.

Other Publications

1. **Seewald, N.J.**, Sun, J., Liao, P. (2016), "MRT-SS Calculator: An R Shiny Application for Sample Size Calculation in Micro-Randomized Trials," arXiv:1609.00695 [stat.ME]

Teaching Experience

Graduate Student Mentor, UNIVERSITY OF MICHIGAN

1. *Introduction to Statistics and Data Analysis*

Fall 2019 - Fall 2020

- Mentored four first-time graduate student instructors through their first teaching experiences.

Instructional Assistant, UNIVERSITY OF MICHIGAN

1. *Introduction to Statistics and Data Analysis*

Summer 2020

Supervisor: Jack Miller, Ph.D.

- Aided in curriculum development for transition to simulation-based inference in large, introductory undergraduate statistics course.
- Redesigned lab experiences to involve in-depth data analysis projects using R code in R Markdown.

Graduate Student Instructor, UNIVERSITY OF MICHIGAN

1. *Introduction to Statistics and Data Analysis*

Spring 2018, Fall 2019 - Fall 2020

Instructor: Brenda Gunderson, Ph.D.

- Large, non-calculus-based, cross-disciplinary introductory statistics course.
- Taught 2-3 weekly lab sections, held office hours, graded homework and exams.
- Designed prelab assignments and created screencasts demonstrating R, R Commander, and R Markdown for data analysis tasks.

2. *Data Mining*

Winter 2018

Instructor: Liza Levina, Ph.D.

- Upper-level introductory machine learning course for undergraduate statistics majors using *An Introduction to Statistical Learning* (James, Witten, Hastie, Tibshirani).
- Taught weekly lab, held office hours, graded homework and exams.

3. *Statistical Learning I: Regression*

Fall 2017

Instructor: Brian Thelan, Ph.D.

- First graduate-level regression course for Applied Statistics masters students.
- Held office hours, graded homework and exams.

Teaching Assistant, Summer Program in Quantitative Methods of Social Research, INTER-UNIVERSITY CONSORTIUM FOR POLITICAL AND SOCIAL RESEARCH

1. *Multilevel Models I: Introduction and Application*

Summer 2018, Summer 2019

Instructor: Mark Manning, Ph.D.

- Four-week course for political and social scientists interested in mixed modeling.
- Held daily office hours; consulted with and graded participants on individual projects on research questions addressable with mixed models.

2. *Introduction to the R Statistical Computing Environment*

Summer 2018, Summer 2019

Instructor: John Fox, Ph.D.

- Two-week lecture series on common data analytic and programming techniques in R. Topics include graphics, data management, modeling, and others.
- Held daily office hours.

Other Experience

Graduate Student Consultant, UNIVERSITY OF MICHIGAN

Sept. 2018 - Dec. 2018

1. *Consulting for Statistics, Computing, and Analytics Research (CSCAR)*
 - Held one-hour walk-in consulting sessions on study design, sample size, data management, data visualization, and statistical analysis.
 - Performed administrative tasks such as scheduling appointments.

Presentations and Posters

Presentations

- 2020 ENAR Spring Meeting. Virtual.
- 2019 International Conference on Computational and Methodological Statistics (CMStatistics). London, UK.
Joint Statistical Meetings. Denver, CO, USA.
Society for Clinical Trials Annual Meeting. New Orleans, LA, USA.
- 2018 Joint Statistical Meetings. Vancouver, BC, Canada.
ENAR Spring Meeting. Atlanta, GA, USA.
- 2015 Graduate Student Statistical Topics Seminar Series, Department of Statistics, University of Michigan. *Invited*.

Posters

- 2019 Michigan Student Symposium for Interdisciplinary Statistical Sciences.
- 2018 Seventh Annual Thomas R. Ten Have Symposium on Statistics in Mental Health. Chicago, IL, USA
- 2017 Michigan Student Symposium for Interdisciplinary Statistical Sciences
- 2015 Michigan Student Symposium for Interdisciplinary Statistical Science
- 2014 IMPACT Symposium III: Advances in Clinical Trial Statistics: Multiplicity Adjustment and SMARTs. Cary, NC, USA

Awards

1. Outstanding Graduate Student Instructor Award. Department of Statistics, University of Michigan, 2020.
2. Best Departmental Poster, Statistics. Michigan Student Symposium for Interdisciplinary Statistical Sciences, 2017
3. Best Departmental Poster, Biostatistics. Michigan Student Symposium for Interdisciplinary Statistical Sciences, 2015

Professional Service

Software

1. SMARTsize: A sample size calculator for sequential, multiple-assignment, randomized trials with binary or continuous outcomes in which the primary aim is to compare two embedded dynamic treatment regimes.
<https://nseewald1.shinyapps.io/SMARTsize/>
2. MRT-SS Calculator: A sample size calculator for micro-randomized trials in which the primary aim is to detect the proximal effect of providing an intervention.
<https://pengliao.shinyapps.io/mrt-calculator/>

Workshop Design and Facilitation

1. “Using SMART Design in Responsive Survey Design.” June 19, 2019
for Responsive Survey Design: A Research Education Program
Institute for Social Research, University of Michigan
Co-facilitator with Ahnalee Brinks, Ph.D.
2. “Getting SMART about Adaptive Interventions in Education.” March 11-14, 2019
IES-funded training institute at the University of Michigan
Co-facilitator with other members of d³lab (d3lab-isr.com)
3. “Getting SMART: Experimental Design and Analysis Methods for Developing Adaptive Interventions” May 19, 2015
University of California, San Francisco
Co-facilitator with Inbal Nahum-Shani, Ph.D.

Manuscript Review

- 2020 *Journal of the American Statistical Association*
- 2018 *Psychological Methods*

Departmental Service

1. Student Representative, Diversity, Equity, and Inclusion Committee. Department of Statistics, University of Michigan.
2. Steering Committee Member, Graduate Student Diversity, Equity, and Inclusion Working Group. Department of Statistics, University of Michigan.

Professional Memberships

1. American Statistical Association
2. International Biometrics Society, Eastern North American Region (ENAR)
3. Society for Clinical Trials

Professional Development

- 2020 Preparing to Teach: Workshop to prepare graduate students for a role as undergraduate faculty responsible for teaching statistics and data science
- Professional Development Diversity, Equity, and Inclusion Certificate. Rackham Graduate School, University of Michigan