

Nicholas J. Seewald

Curriculum Vitae

CONTACT INFORMATION

ADDRESS: 311 West Hall, 1085 South University Ave, Ann Arbor, MI, 48109
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EDUCATION

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| Expected 2020 | Doctor of Philosophy , Statistics UNIVERSITY OF MICHIGAN, Ann Arbor, Michigan Passed qualifying exams in May 2016 |
| MAY 2015 | Master of Science , Biostatistics UNIVERSITY OF MICHIGAN, Ann Arbor, Michigan |
| MAY 2013 | Bachelor of Science <i>cum laude</i> , Mathematics with Life Science UNIVERSITY OF NOTRE DAME, Notre Dame, Indiana Glynn Family Honors Program |

RESEARCH EXPERIENCE

Graduate Student Research Assistant, University of Michigan

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| Current - JUL 2016 | Supervisor: Daniel Almirall, Ph.D. <ul style="list-style-type: none">– Developed sample size methods for sequential, multiple-assignment randomized trials in which the primary aim is to compare two embedded dynamic treatment regimes on a continuous, repeated-measures outcome. |
| SEP 2015 - JUL 2016 | Supervisor: Susan A. Murphy, Ph.D. <ul style="list-style-type: none">– Managed complex, intensive longitudinal data arising from <i>HeartSteps</i>, a micro-randomized trial involving smartphone-based interventions aimed at increasing physical activity in sedentary adults (PI: Predrag Klasnja, Ph.D.).– Performed primary analyses for <i>HeartSteps</i> to assess a proximal, marginal causal effect of providing the intervention versus not on participant step count. |
| JAN 2014 - AUG 2015 | Supervisor: Kelley M. Kidwell, Ph.D. <ul style="list-style-type: none">– Developed a web application for sizing sequential, multiple-assignment, randomized trials with binary or continuous outcomes in which the primary goal is to compare two embedded dynamic treatment regimes.– Helped derive sample size methods for use in aforementioned application.– Collaborated with investigators in the University of Michigan Health System, School of Pharmacy, and Department of Psychology on data analysis projects involving cancer, genetics, and obesity. |

SEP 2013 - | **Supervisor:** Gonalo Abecasis, D.Phil.
JAN 2014 | – Worked on aligning whole-genome samples from a large-scale case control study on age-related macular degeneration.

Undergraduate Honors Thesis, Department of Mathematics, University of Notre Dame

APR 2012 - | ENTROPY AND COUNTING
APR 2013 | **Supervisor:** David Galvin, Ph.D.
– Studied properties of the entropy of a random variable and its combinatorial implications.

Undergraduate Research, Department of Chemistry and Biochemistry, University of Notre Dame

JAN 2010 - | **Supervisor:** Seth N. Brown, Ph.D.
MAY 2012 | – Synthesized a number of chiral boron molecules for analysis via NMR and X-Ray crystallography to investigate bond angles at the boron center.
– Studied NMR kinetics of reactions between molybdenum tris(catecholate) and nitrogen-containing compounds to investigate a probable reaction mechanism.

TEACHING EXPERIENCE

Graduate Student Instructor, Department of Statistics, University of Michigan

FALL 2017 | **STATS 500:** Statistical Learning I: Regression
Instructor: Brian Thelan, Ph.D.
– Introductory regression course for students in the Masters program of Applied Statistics. Covered linear regression through shrinkage methods; includes an introduction to R.
– Held weekly office hours and graded weekly homework for 107 students.

Undergraduate Teaching Assistant, Department of Biological Sciences, University of Notre Dame

SPRING 2012 | **BIOS 4041I:** Biostatistics
Instructor: Gary Lamberti, Ph.D.
– Introduction to statistical principles—including inference, ANOVA, regression, and non-parametrics—with biological applications
– Helped design and facilitate weekly tutorial sessions structured around data analysis in R

PUBLICATIONS

In Progress

Seewald, N.J., Smith, S.N., Lee, A.J., Klasnja, P., Murphy, S.A. (Under review) “Practical Considerations for Data Collection and Management in Mobile Health Micro-randomized Trials.” *Statistics in Biosciences*.

Seewald, N.J., Kidwell, K.M., Wu, T., Nahum-Shani, I., Almirall, D. (In progress) “Sample size considerations for comparing dynamic treatment regimens in a sequential multiple-assignment randomized trial with a continuous longitudinal outcome.”

Smith, S.N., **Seewald, N.J.**, Lee, A.J.S., Hall, K., Necamp, T., Luers, B., Murphy, S.A., Klasnja, P. (In progress) "User Experience with HeartSteps, a Context-aware Application for Supporting Physical Activity."

Klasnja, P., Smith, S., **Seewald, N.J.**, Lee, A., Hall, K., Luers, B., Hekler, E., Murphy, S.A. "Effectiveness of contextually-tailored suggestions for physical activity: A micro-randomized trial of HeartSteps."

Peer-Reviewed

2017 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*, <http://dx.doi.org/10.1016/j.jstrokecerebrovasdis.2016.09.010>.

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*

2016 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*, <http://doi.org/10.1038/tpj.2016.60>

Kadakia, K. C., Snyder, C. F., Kidwell, K. M., **Seewald, N. J.**, ..., Henry, N. L. (2016), "Patient-Reported Outcomes and Early Discontinuation in Aromatase Inhibitor-Treated Postmenopausal Women With Early Stage Breast Cancer" *The Oncologist*, 2, 539-546, <http://doi.org/10.1634/theoncologist.2015-0349>.

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, <http://doi.org/10.2217/pgs.15.162>.

2013 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, 12587-12598, <http://doi.org/10.1021/ic401736f>

2012 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(63) 7826-7828. <http://doi.org/10.1039/c2cc33523a>

Published Abstracts

2016 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), "Abstract P5-12-05: CYP3A4* 22 polymorphism is associated with increased exemestane concentrations in postmenopausal breast cancer patients," *Cancer Research*, 76, 4 [supplement], P5-12-05, <http://dx.doi.org/10.1158/1538-7445.SABCS15-P5-12-05>.

Kadakia, K.C., Kidwell, K.M., **Seewald, N.J.**, Snyder, C.F., Flockhart, D.A., Otte, J.L., Hayes, D.F., Storniolo, A.M., Stearns, V., and Henry, N.L. (2016), "Crossover from One Aromatase Inhibitor (AI) to Another in the Exemestane and Letrozole Pharmacogenetics (ELPh) Trial," *Journal of Clinical Oncology*, 34, 3 [supplement], 158.

- 2015 | Mammoser, A.G., Weathers, S.S., **Seewald, N.J.**, Taylor, J.M.G., and Junck, L. (2015), "Primary CNS Lymphoma; A Review of the University of Michigan Experience 2004-2013," *Journal of Clinical Oncology*, 33, 15 [supplement], e13012.
- Kadokia, K.C., Snyder, C.F., Kidwell, K.M., **Seewald, N.J.**, Storniolo, A.M., Flockhart, D.A., Carpenter, J.S., Hayes, D.F., Stearns, V., and Henry, N.L. (2015), "Associations between Treatment-Emergent Symptoms and Early Discontinuation of Aromatase Inhibitor (AI) Therapy," *Journal of Clinical Oncology*, 33, 15 [supplement], e20745.

POSTERS AND PRESENTATIONS

Posters

- 2017 | **Seewald, N.J.**, Nahum-Shani, I., McKay, J.R., Almirall, D. "Sample Size Considerations for the Analysis of Continuous Repeated-Measures Outcomes in Sequential Multiple-Assignment Randomized Trials." Michigan Student Symposium for Interdisciplinary Statistical Sciences. Ann Arbor, MI.
- 2015 | **Seewald, N.J.**, Almirall, D., Kidwell, K.M. "A SMART Web-Based Sample Size Calculator." Michigan Student Symposium for Interdisciplinary Statistical Sciences. Ann Arbor, MI.
- 2014 | **Seewald, N.J.**, Almirall, D., Kidwell, K.M. "A SMART Web-Based Sample Size Calculator." IMPACT Symposium III: Advances in Clinical Trial Statistics: Multiplicity Adjustment and Sequential, Multiple Assignment, Randomized Trials. Cary, NC.

Presentations

- 2018 | **Seewald, N.J.**, Kidwell, K.M., Nahum-Shani, I., McKay, J.R., Almirall, D. "Sample Size Considerations for Comparing Dynamic Treatment Regimens in a Sequential Multiple-Assignment Randomized Trial with a Continuous Longitudinal Outcome." ENAR Spring Meeting. Atlanta, GA.
- 2016 | **Seewald, N.J.** "GITting Started with Reproducibility: An Introduction to git and knitr." Biostatistics Student Association Computing Workshop, University of Michigan. January 29, 2016. *Invited*.
- 2015 | **Seewald, N.J.** "Getting Started with LaTeX." Biostatistics Brown Bag Seminar, Department of Biostatistics, University of Michigan. November 6, 2015. *Invited*.
- Seewald, N.J.**, Almirall, D., Kidwell, K.M. "Design, Analysis, and Sizing of Sequential Multiple Assignment Randomized Trials with Binary Outcomes." Graduate Student Statistical Topics Seminar Series, Department of Statistics, University of Michigan. September 24, 2015. *Invited*.
- Seewald, N.J.**, Almirall, D. "An Introduction to Adaptive Interventions and SMARTs." Guest Lecture, Advanced Seminar in Survey Methodology. Instructor William Yeaton, Ph.D. Institute for Social Research, University of Michigan. June 24-25, 2015.
- Nahum-Shani, I., **Seewald, N.J.** "Getting SMART: Experimental Design and Analysis Methods for Developing Adaptive Interventions." University of California San Francisco. May 19, 2015.

AWARDS

- 2017 | Winner, Best Departmental Poster - Statistics. Michigan Student Symposium for Interdisciplinary Statistical Sciences. March 24, 2017.

2015 | Winner, Best Departmental Poster - Biostatistics. Michigan Student Symposium for Interdisciplinary Statistical Sciences. March 20, 2015.

PROFESSIONAL SOCIETY MEMBERSHIP

American Statistical Association
Society for Clinical Trials
ENAR