

Kenneth J. Nieser

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Research Interests

Social and psychiatric epidemiology, health disparities, equitable algorithms

Education

2018-2023 Ph.D. Epidemiology (Minor: Statistics)
(expected) University of Wisconsin-Madison
Advisor: Amy Cochran, PhD

2009-2013 B.A. Physics and Mathematics (graduated with High Honors)
Swarthmore College

Awards and Fellowships

2020 Rankin/Skatrud Travel Award
2019 Biology and Medicine through Mathematics (BAMM!) Travel Award
2019 Student Research Grants Competition – Conference Presentation Funds
2018-2019 New Graduate Student Fellowship

Research Positions

2020-present Research Assistant, *University of Wisconsin-Madison*
(PI: Amy Cochran).

2019-2020 Project Assistant, *University of Wisconsin-Madison*
UW Madison Center for Human Genomics and Precision Medicine Seed Grant
(PI: Amy Cochran). Gene-set enrichment with mathematical biology.

Publications

Epidemiology/Population Health

1. Cochran, A. L., Nieser, K. J., Forger, D. B., Zöllner, S., & McInnis, M. G. (2020). Gene-set Enrichment with Mathematical Biology (GEMB). *GigaScience*, 9(10), gaaa091.
<https://doi.org/10.1093/gigascience/gaaa091>

Chemical Physics

1. Collings, P. J., Goldstein, J. N., Hamilton, E. J., Mercado, B. R., Nieser, K. J., & Regan, M. H. (2015). The nature of the assembly process in chromonic liquid crystals. *Liquid Crystals Reviews*, 3(1), 1-27.
<https://doi.org/10.1080/21680396.2015.1025305>
2. Mercado, B. R., Nieser, K. J., & Collings, P. J. (2014). Cooperativity of the assembly process in a low concentration chromonic liquid crystal. *The Journal of Physical Chemistry. B*, 118(46), 13312–13320. <https://doi.org/10.1021/jp510025j>

Presentations and Posters

1. Detecting Inequity in the Analysis of Psychological Data. 2021 Data Science Research Bazaar: *Data Science for the Social Good*, University of Wisconsin-Madison (lightning talk).
2. Bias Analysis of Depression Rate Comparisons between Racial/Ethnic Groups. Society for Epidemiologic Research, Annual Meeting 2020 (poster).
3. Addressing Heterogeneity in Mental Illnesses through Robust Estimation. Population Health Sciences Annual Poster Session 2020 (poster).
4. Robust estimation for factor loadings with application to postpartum depression. BAMM! 2019 (poster).
5. Kinetics of Assembly and Dis-assembly of Structures Forming a Chromonic Liquid Crystal at Low Concentrations. APS March Meeting 2013 (oral).

Teaching

Teaching Associate, *Swarthmore College*

Spring 2013	General Physics II
Spring 2012	General Physics II with Biomedical Applications
Fall 2011	General Physics I
Fall 2011-12	Spacetime, Quanta & Cosmology

Tutor, *Swarthmore College*

Spring 2013	General Physics II
Spring 2012	General Physics II with Biomedical Applications
Fall 2011-12	General Physics I

Professional Employment

2017-2018	Senior Analyst, <i>Healthgrades</i> <i>Madison, WI</i> Supported internal teams as a subject-matter expert on data analysis and campaign research; assisted in training of new analysts.
2015-2017	Market Analyst, <i>Healthgrades</i> <i>Madison, WI</i> Analyzed electronic medical record data and third-party demographic data to inform marketing strategy and planning for hospital clients.
2014-2015	Healthcare Data Analyst, <i>HP Enterprise Services</i> <i>Madison, WI</i> Analyzed Wisconsin Medicaid claims data and managed care enrollment data, compiled reports for clients in Wisconsin Department of Health Services.
2013-2014	Technical Services Analyst, <i>Epic</i>

Verona, WI

Supported multiple hospital organizations in optimizing and troubleshooting Epic software.