Maria E. Kamenetsky

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GitHub: *mkamenet3*

Research Interests

Spatial and spatio-temporal cluster detection

Spatial epidemiology methods and applications

Education

2016–Present **Ph.D. Candidate, Epidemiology**, *University of Wisconsin-Madison*.
Department of Population Health Sciences
Minor: Computer Sciences
Advisors: Ronald Gangnon, Ph.D. & Jun Zhu, Ph.D.

2014–2016 **M.S., Statistics**, *University of Wisconsin-Madison*.
Department of Statistics

2007–2011 **B.A., Economics, Political Science, International Studies**.
Comprehensive Honors in Liberal Arts, *University of Wisconsin-Madison.*

Research Experience

2020–2021 **Statistical Consultant**.
Wisconsin Department of Health Services *Madison, Wisconsin*

2016–Present **Project Assistant (Statistical Consultant)**, *University of Wisconsin-Madison*.
College of Agricultural and Life Sciences (CALS) Statistical Consulting Group,
Department of Computing & Biometry *Madison, Wisconsin*

2017–2018 **Statistical Consultant**.
Madison Water Utility *Madison, Wisconsin*

2016 **Data Science Fellow**, *University of Chicago*, Center for Data Science & Public Policy.
Eric & Wendy Schmidt Data Science for Social Good Fellowship *Chicago, Illinois*

2015 **Graduate Research Assistant**, *University of Wisconsin-Madison*.
Center for Demography & Ecology *Madison, Wisconsin*

2011-2014 **Research Professional**, *University of Chicago*, Accounting Research Center.
University of Chicago Booth School of Business *Chicago, Illinois*

Research Publications

Methodology

1 Lee, J., **Kamenetsky, M.**, Zhu, J., Gangnon, R. (2021). "Clustered spatio-temporal varying coefficient regression model." *Statistics in Medicine.* 40(2): 465-480.

2 **Kamenetsky, M.**, Chi, G., Wang, D., Zhu, J. (2019). "Spatial Regression Analysis of Poverty in R." *Spatial Demography* 7(2-3): 1-35.

Scientific Collaborations

1 Mallinson, D., **Kamenetsky, M.**, Hagen, E., Peppard, P. (2019). "Subjective sleep measurement: comparing sleep diary to questionnaire." *Nature and Science of Sleep* 11: 197-206.

2 Skarlupka, J., **Kamenetsky, M.**, Jewell, K., Suen. G. (2019). "The ruminal bacterial community in lactating dairy cows has limited variation on a day-to-day basis." *Journal of Animal Science and Biotechnology* 10: 66.

Oral Presentations

Mar. 2021 Identifying Spatial Clusters of Breast Cancer Risk: A Lasso Approach to the Wisconsin Women's Health Study.
Kamenetsky, M.*, Trentham-Dietz, A., Newcomb, P., Zhu, J., Gangnon, R.
ENAR Spring Meeting *Virtual*

Dec. 2020 Identification of Breast Cancer Spatial Structures Based on the Wisconsin Women's Health Study.
Kamenetsky, M.*, Trentham-Dietz, A., Newcomb, P., Gangnon, R.
Society for Epidemiologic Research (SER) Annual Meeting *Virtual*

Aug. 2020 Detecting Disease Clusters Across Space and Time Using Model Averaging.
Kamenetsky, M.*, Gangnon, R.
American Statistical Association (ASA) Joint Statistical Meetings (JSM) *Virtual*

Sep. 2019 Statistical Analysis of Madison Water Utility Main Breaks.
Kamenetsky, M.*, McClure, S.*
Wisconsin Section of the American Water Works Association *Madison, WI*

Aug. 2016 Predicting Enforcement of Pollution and Hazardous Waste Violations in New York State.
Potash, E., Jin, J., **Kamenetsky, M.***, Magee, D., Van der Boor, P., Ghani, R.
Data Science for Social Good Conference *Chicago, IL.*

* indicates presenter.

Poster Presentations

Mar. 2020 Space and Space-Time Cluster Detection Using the LASSO.
Kamenetsky, M., Lee, J., Zhu, J., Gangnon, R.
UW-Madison Department of Population Health Sciences Annual Poster Session *Madison, WI*

Jan. 2020 Space and Space-Time Cluster Detection Using the LASSO.
Kamenetsky, M., Lee, J., Zhu, J., Gangnon, R.
UW-Madison Data Science Hub: Data Science Research Bazaar *Madison, WI*

Jun. 2019 Space and Space-Time Cluster Detection Using the LASSO.
Kamenetsky, M., Lee, J., Zhu, J., Gangnon, R.
Society for Epidemiologic Research (SER) Annual Meeting *Minneapolis, MN.*

Teaching

Instructor (Lecturer Student Assistant).

Spring 2019, 2020, 2021 Spatial Statistics for Lattice Data (STAT 679-III) *University of Wisconsin-Madison*

Teaching Assistant.

Fall 2014 Introductory Statistics (STAT 301) *University of Wisconsin-Madison*

Workshops.

2021 A Crash Course on Git & GitHub
- *Instructor* (Apr. 2021)

2021 Introduction to Git
- *Helper* (Mar. 2021)

2021 RStudio::Global(2021) Conference Workshop:
- *Teaching Assistant:* Introduce Yourself Online (Instructor: Alison Hill) (Jan. 2021)

2019-21 Geospatial Carpentry
- *Instructor:* Raster Data (Jul. 2019, Jul. 2020, Jul. 2021)

2020 Reproducible Research: Practical Tools & Applications Workshop
- *Instructor:* Reproducible Visualization

2019 `R` for Researchers Workshop Series
- *Instructor:* Introduction to the Unix Shell (Nov. 2019)
- *Helper:* Visualization with `ggplot2`, Data Wrangling with `dplyr` (Mar. 2019)

2019 Data Carpentry: Health Sciences Workshop
- *Instructor:* Introduction to `ggplot2` (Jun. 2019)

- *Instructor:* Introduction to `RMarkdown` (Jun. 2019)

2018-2019 Data Carpentry: Ecology Workshop

- *Instructor:* Introduction to `R` (Jun. 2018, Aug. 2018)
- *Instructor:* Introduction to `ggplot2` (Jan. 2019)
- *Instructor:* Introduction to `RMarkdown` (Jan. 2019)

2017-2020 Software Carpentry: Unix Shell, Python, & Git

- *Helper:* (Aug. 2017, Jan. 2018, Apr. 2020)

Reviewer

International Journal of Health Geographics

Statistics in Medicine

The R Journal

Awards, Grants, and Fellowships

2021 RStudio::Global(2021) Diversity Scholar

2020 Robert F. and Jean E. Holtz Center for Science and Technology Studies Virtual Conference Grant

2020 American Statistical Association (ASA) Wisconsin Chapter Student Virtual Travel Award

2020 Catherine Allen Outstanding Student Poster Award, Department of Population Health Sciences, University of Wisconsin-Madison

2019 Student Research Travel Grant, University of Wisconsin-Madison

2016 Outstanding New Student Scholarship, Department of Population Health Sciences, University of Wisconsin-Madison

2016 The Eric & Wendy Schmidt Data Science for Social Good Summer Fellowship

Certification

2018 Certified Instructor - Data and Software Carpentry (The Carpentries)

Professional Society Membership

International Biometric Society (East North American Region)

Society for Epidemiologic Research

American Statistical Association

Leadership

Service.

2017-present Population Health Sciences Student Organization, *University of Wisconsin-Madison*

- Social Media Chair (2020-21)
- Curriculum Committee Representative (Epidemiology) (2020-21; 2018-19)
- Admissions Committee Representative (2019-20)
- Social Chair (2017-18)

Mentorship.

2020 Women in Scientific Education and Research, *University of Wisconsin-Madison*

- Mentor to Undergraduate

2019, 2020 Population Health Sciences Peer Connections, *University of Wisconsin-Madison*

- Mentor to MS Population Health Sciences Student

Volunteering.

2019 Biostatistics Tutor, *University of Wisconsin-Madison*

- Provided weekly biostatistics tutoring for coursework in Regression Methods for Population Health (PHS/BMI 552) for two graduate students.

2014 Statistics Tutorial Lab, *University of Wisconsin-Madison*

- *Statistics Tutor:* Tutored undergraduate students enrolled in introductory through intermediate statistics courses.

Software Development

2020 `strm`, an `R` package that fits a spatio-temporal regression model based on Chi & Zhu Spatial Regression Models for the Social Sciences (2020) (maintainer & developer: M. Kamenetsky). Available on CRAN.

2020 `coefclust`, an `R` package for detecting spatial clusters in regression coefficients (developer: J. Lee; maintainer: M. Kamenetsky)

Technical Skills

Statistical	R (advanced), SAS (advanced), STATA (intermediate)
Scripting	Python (intermediate), Unix Shell (intermediate), C++ (beginner)
Databases	PostgreSQL (beginner), MySQL (beginner)
Markup	Markdown (intermediate), LaTeX (intermediate)
OS	Unix/Linux (Ubuntu, RedHat), MacOS, MS Windows
Version Control/Software	Git (intermediate), SaTScan (advanced), QGIS (beginner)

Additional Education

2012-14 *University of Chicago*

- *Graduate Student At-Large:* Completed coursework in multivariate calculus, linear algebra, statistical theory and methodology I & II.

Languages

Russian	Fluent
Spanish	Intermediate
English	Native