

Eric Potash

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| EXPERIENCE | University of Illinois Urbana-Champaign Research Scientist, Institute of Sustainability, Energy, and Environment | 2020–Now |
| | University of Chicago Postdoctoral Scholar (Advisor: Dan Black), Harris School of Public Policy | 2017–2020 |
| EDUCATION | Northwestern University Ph.D. Mathematics (Advisor: Steve Zelditch) Dissertation: Euclidean Embeddings and Riemannian Bergman Metrics | 2009–2014 |
| | Columbia University B.A. Mathematics with Honors, Columbia College Thesis: An Application of Poincaré’s Fundamental Polyhedron Theorem | 2005–2009 |
| PUBLICATIONS | Measure-and-remeasure as an economically feasible approach to crediting soil organic carbon at scale <i>Environmental Research Letters</i> 20 (2025) 024025. E Potash , MA Bradford, EE Oldfield, K Guan | |
| | Multi-site evaluation of stratified and balanced sampling of soil organic carbon stocks in agricultural fields <i>Geoderma</i> 438, 116587 (2023). E Potash , et al. | |
| | How to estimate soil organic carbon stocks of agricultural fields? Perspectives using ex-ante evaluation <i>Geoderma</i> 411, 115693 (2022). E Potash , K Guan, A Margenot, DK Lee, E DeLucia, S Wang, C Jang | |
| | A Bayesian Approach to Recreational Water Quality Model Validation and Comparison in the Presence of Measurement Error <i>Water Resources Research</i> , e2021WR031115 (2022). E Potash and S Steinschneider | |
| | Algorithmic Fairness: Choices, Assumptions, and Definitions <i>Annual Reviews of Statistics</i> 8, 2021. S Mitchell, E Potash , S Barocas, A D’Amour, K Lum | |
| | Validation of a Machine Learning Model to Predict Childhood Lead Poisoning <i>JAMA Network Open</i> 3 (9), e2012734-e2012734 E Potash , R Ghani, J Walsh, E Jorgensen, C Lohff, N Prachand, R Mansour | |
| | Randomization Bias in Field Trials to Evaluate Targeting Methods <i>Economics Letters</i> , Volume 167, June 2018, Pages 131–135. E Potash | |
| | Predictive Modeling for Public Health: Childhood Lead Poisoning <i>21st ACM SIGKDD Proceedings</i> E Potash , et al. | |
| | Euclidean Embeddings and Riemannian Bergman Metrics <i>The Journal of Geometric Analysis</i> , January 2016, Volume 26, Issue 1, pp 499-528 E Potash | |

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| OTHER WRITING | <p>Why It's So Hard to Find Out Where the Candidates Stand <i>Washington Monthly</i>, November 2016</p> | | | | | | | | |
| INVITED TALKS | <p>Soil Science Society of America Annual Meeting Measure-and-remeasure of soil organic carbon at scale, 11/11/2024</p> <p>Environmental Policy Institute at Chicago (EPIC) Workshop Can Health Departments Prevent Childhood Lead Poisoning?, 5/15/2018</p> <p>EPA Research and Development "Science at Work" Seminar Proactive Lead Investigations, 4/12/2017</p> <p>City Bureau Public Forum Lead Poisoning Panel Speaker, 3/13/2017</p> <p>American Public Health Association Annual Meeting Predictive Analytics in Advancing Public Health Session, 11/3/2015</p> <p>Bloomberg Data for Good Exchange Predictive Modeling for Public Health: Childhood Lead Poisoning, 9/30/2015</p> <p>ACM Knowledge Discovery and Data Mining (KDD) Annual Conference Predictive Modeling for Public Health: Childhood Lead Poisoning, 8/12/2015</p> | | | | | | | | |
| CONFERENCE PRESENTATIONS | <p>Predicting Soil Organic Carbon Variability with Applications for Sampling Design American Geophysical Union Fall Meeting 2022, Chicago, IL, December 2022</p> <p>A Bayesian Approach to Recreational Water Quality Model Validation and Comparison in the Presence of Measurement Error American Geophysical Union Fall Meeting 2022, Chicago, IL, December 2022</p> | | | | | | | | |
| REVIEWER | <p>Geoderma, Environmental Science and Technology, JAMA Network Open, Earth and Space Science</p> | | | | | | | | |
| GRANTS | <p>Link changes in dynamic soil properties (DSP) with soil morphology and soil classification over multiple decades to support integration of DSP with national soil survey to reflect the changes induces by human land use Natural Resources Conservation Service. With A. Margenot, S. Xu, C. Attanayake. \$500,000.</p> <p>Collecting and Sharing Information across Sectors in Chicago and Illinois to Identify Children at Risk for Lead Poisoning. Robert Wood Johnson Foundation. With Rayid Ghani, Raed Mansour, Matthew Roberts, John DiCello, Tom Schenk, Illinois Department of Human Services, and Alliance of Chicago. Grant ID 73354. \$200,000.</p> | | | | | | | | |
| INDUSTRY EXPERIENCE | <table border="0" style="width: 100%;"> <tr> <td style="padding-bottom: 10px;">University of Chicago Research Professional II, Center for Data Science and Public Policy</td> <td style="text-align: right; vertical-align: bottom;">2014–2017</td> </tr> <tr> <td style="padding-bottom: 10px;">Eric and Wendy Schmidt Data Science for Social Good Technical Mentor</td> <td style="text-align: right; vertical-align: bottom;">Summer 2016</td> </tr> <tr> <td style="padding-bottom: 10px;">Open Energy Efficiency Meter (openeemeter.org) Data Scientist</td> <td style="text-align: right; vertical-align: bottom;">2015</td> </tr> <tr> <td style="padding-bottom: 10px;">Oroeco (oroeco.com) Scientific Software Engineer</td> <td style="text-align: right; vertical-align: bottom;">2014</td> </tr> </table> | University of Chicago Research Professional II, Center for Data Science and Public Policy | 2014–2017 | Eric and Wendy Schmidt Data Science for Social Good Technical Mentor | Summer 2016 | Open Energy Efficiency Meter (openeemeter.org) Data Scientist | 2015 | Oroeco (oroeco.com) Scientific Software Engineer | 2014 |
| University of Chicago Research Professional II, Center for Data Science and Public Policy | 2014–2017 | | | | | | | | |
| Eric and Wendy Schmidt Data Science for Social Good Technical Mentor | Summer 2016 | | | | | | | | |
| Open Energy Efficiency Meter (openeemeter.org) Data Scientist | 2015 | | | | | | | | |
| Oroeco (oroeco.com) Scientific Software Engineer | 2014 | | | | | | | | |

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| TEACHING | <p>University of Chicago Multilevel Regression Modeling for Public Policy (Winter 2020) Introduction to Program Evaluation (Spring 2019, Winter 2020) Introduction to Programming for Public Policy (Spring 2018, 2016)</p> | 2016-2020 |
| | <p>Northwestern University Assistant: Probability & Stochastic Processes, Mechanics, Real Analysis</p> | 2008–2013 |
| SKILLS | <p>Python (numpy, scipy, pandas, sklearn, matplotlib) R (tidyverse, Stan) SQL (PostgreSQL), Java, JavaScript (D3.js), Ruby (on Rails) Geospatial (PostGIS, GDAL, OpenStreetMap, Mapnik, QGIS, Leaflet) git, bash, GNU/Linux, L^AT_EX Fluent in Russian</p> | |
| REFERENCES | <ul style="list-style-type: none"> • Kaiyu Guan, kaiyug@illinois.edu Professor, Agroecosystem Sustainability Center, University of Illinois Urbana-Champaign • Dan Black, danblack@uchicago.edu Professor, Harris School of Public Policy, University of Chicago • Emile Jorgensen, Emile.Jorgensen@cityofchicago.org Epidemiologist, Chicago Department of Public Health | |