Katherine R. McLaughlin

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A. EDUCATION AND EMPLOYMENT INFORMATION

A.1 Education

2011 – 2016 Ph.D. in Statistics, University of California, Los Angeles
Thesis Advisor: Mark S. Handcock
Thesis Title: Modeling Preferential Recruitment for Respondent-Driven Sampling

2007 – 2011 B.A. in Statistics (with Honors), University of California, Berkeley
Thesis Advisor: Phillip B. Stark
Thesis Title: Workload Estimates for Risk-Limiting Audits of Large Contests
B.A. in Classical Civilization, University of California, Berkeley

A.2 Employment

Oregon State University

Fall 2016 – Present Assistant Professor of Statistics, College of Science and College of Agricultural Sciences
Fall 2018 – Present Adjunct in Biostatistics, College of Public Health and Human Sciences

University of California, Los Angeles, Department of Statistics

Spring 2015 Special Reader, STAT 218 Statistical Analysis of Networks
Summer 2013 Teaching Assistant, STAT 100B Introduction to Mathematical Statistics

Energy Information Administration, U.S. Department of Energy

June – Sept 2012 Mathematical Statistician [Worked with nationwide household-level survey data on energy consumption to compare various existing and original missing data imputation methods.]

Child Health and Development Studies, Public Health Institute

June – July 2014, June – Nov 2010, June – Aug 2008 Intern and consultant [Cleaned and analyzed large data sets from various health surveys conducted in conjunction with Kaiser Permanente hospitals. Modeled reproductive health determined by serval fertility measures based on pre-natal and contemporary risk factors, adjusted for demographic parameters.]

B. TEACHING, ADVISING, AND OTHER ASSIGNMENTS

McLaughlin's regular teaching load is three quarter courses per academic year. She was granted a 1-course release her first academic year (2016-2017). The Department of Statistics considers co-teaching the Consulting Practicum (ST 407/507/509) as 1/3 of a course, or 1 course for the full academic year. McLaughlin bought out 1 course of teaching during her fifth academic year (2020-2021) using support from the TRACE-COVID-19 project. She was granted a 1-course release during her sixth academic year (2021-2022) to develop a new Ecampus course for the Data Analytics program.

B.1 Instructional Summary

B.1.i Credit Courses

Instructor with full responsibility

Term	Course	Name	Credits	Enrollment
Winter 2022	ST 552	Statistical Methods II	4	13
Fall 2021	ST 431/531	Sampling Methods	3	27
Winter 2021	ST 552†	Statistical Methods II	4	14
Fall 2020	ST 431/531†	Sampling Methods	3	38
Spring 2020	ST 553†	Statistical Methods III	4	23
Fall 2019	ST 431/531	Sampling Methods	3	20
Winter 2019	ST 411/511	Methods of Data Analysis	4	134
Fall 2018	ST 431/531	Sampling Methods	3	32
Fall 2018	ST 507	Research Seminar	1	29
Spring 2018	ST 553	Statistical Methods III	4	27
Winter 2018	ST 411/511	Methods of Data Analysis	4	129
Fall 2017	ST 431/531	Sampling Methods	3	26
Spring 2017	ST 518*	Data Analytics II	4	9
Fall 2016	ST 431/531	Sampling Methods	3	31

* Ecampus course
† Remote format due to COVID-19

Instructor with shared responsibility

Term	Course	Name	Responsibility	Credits	Enrollment
Spring 2020	ST 407/507/509†	Consulting Practicum	50%^, with Lisa Ganio	1/1/2	17
Winter 2020	ST 407/507/509	Consulting Practicum	50%^, with Yanming Di	1/1/2	29
Fall 2019	ST 407/507/509	Consulting Practicum	50%^, with Lisa Ganio	1/1/2	17
Spring 2021	ST 407/507/509	Consulting Practicum	50%^, with Duo Jiang	1/1/2	18
Winter 2019	ST 407/507/509	Consulting Practicum	50%^, with Yanming Di	1/1/2	22
Fall 2018	ST 407/507/509	Consulting Practicum	50%, with Alix Gitelman	1/1/2	29
Fall 2017	ST 407/507/509	Consulting Practicum	50%, with Lan Xue	1/1/2	22

† Remote format due to COVID-19
^ Lead role – the consulting practicum has a primary and secondary faculty member, where the primary is responsible for organizing the facilitating the practicum, in addition to providing support on projects

Independent study courses (note: thesis, project credit, and internship courses are not listed)

Term	Course	Name	Credits	Enrollment
Fall 2021	ST 505	Reading and Conference	1	1
Fall 2019	H 605	Reading and Conference	1	1

Guest lecturer

- BI 499/IB 599 (Mobilizing Science: COVID-19), Winter 2021
- GEO 508 (NRT Intensive Field Course/Introduction to NRT Workshop), Fall 2018
- MKTG 390 (Marketing Research) at University of Oregon, Spring 2017

B.1.iv Graduate and Undergraduate Students and Postdoctoral Trainees

Graduate Student Committees (Year indicates graduation date, unless current student as noted by '– Present')

Name	Major	Degree	Year	Role
Gauri Phatak[1]	Statistics	PhD	Sp 2021 – Present	Major professor
Matthew Klapman*	Statistics	PhD	F 2019 – Sp 2021	Major professor
Laura Gamble[2]	Statistics	PhD	W 2021	Major professor
Connor Crane	Data Analytics	MS	W 2022 – Present	Major professor
Hailey Muller	Data Analytics	MS	Su 2021 – Present	Major professor
Andro Wohlgenant	Data Analytics	MS	Su 2021 – Present	Major professor

Tiffany Chan	Data Analytics	MS	F 2020 – Present	Major professor
Coltyn Miller	Data Analytics	MS	F 2020 – Present	Major professor
Suranjana Rangarajan	Data Analytics	MS	F 2020 – Present	Major professor
Laura McNerney	Data Analytics	MS	F 2018 – Present	Major professor
Katherine Tallan[1]	Statistics	MS	W 2022	Major professor
Shannon Leiss	Statistics	MS	W 2022	Major professor
Leah Marcus	Statistics	MS	Sp 2021	Major professor
Gauri Phatak	Statistics	MS	Sp 2021	Major professor
Austin Lyons	Data Analytics	MS	Sp 2021	Major professor
Jaden Boehme	Statistics (minor in Business Administration)	MS	W 2021	Major professor
Connor Edwards	Statistics	MS	Sp 2020	Major professor
Lisa Wilson	Statistics	MS	Sp 2020	Major professor
Aaron Weinstock	Statistics (minor in Risk and Uncertainty Quantification in Marine Science)	MS	Su 2019	Major professor
Matthew Klapman	Statistics	MS	Sp 2019	Major professor
Mark Stephens	Statistics	MS	W 2019	Major professor
Zachariah Reed	Statistics	MS	W 2018	Major professor
Laura Gamble[2]	Statistics	MS	Sp 2017	Major professor
Johanna Doty[3]	Statistics	MS	W 2017	Major professor
Abdulaziz Alotaibi	Civil Engineering	PhD	Sp 2022 – Present	Minor Professor (Statistics)
Emily Hoard	Mathematics	PhD	W 2022 – Present	Minor Professor (Statistics)
Yue Ni	Human Development and Family Studies	PhD	W 2022 – Present	Minor professor (Statistics)
Agung Irawan	Animal and Rangeland Sciences	PhD	F 2021 – Present	Minor professor (Biological Data Sciences)
Andrew Anderson	Computer Science	PhD	Sp 2019 – Present	Minor professor (Statistics)
Cailin Mackenzie	Fisheries and Wildlife	PhD	W 2019 – Present	Minor professor (Statistics)
Yuzhi Sun	Industrial Engineering	PhD	F 2017 – Present	Minor professor (Statistics)
Adriana Messyasz	Environmental Sciences	PhD	F 2021	Minor professor (Biological Data Sciences; Risk and Uncertainty in Marine Science)
Becca Maher	Microbiology	PhD	Sp 2021	Minor professor (Biological Data Sciences)
Ziyu Jin	Civil Engineering	PhD	Sp 2021	Minor professor (Statistics)
Ali Karakhan	Civil Engineering	PhD	W 2020	Minor professor (Statistics)
Ahmed Abdulhaq Ahmed	Civil Engineering	PhD	F 2018	Minor professor (Statistics)
Kasim Alomari	Civil Engineering	PhD	F 2017	Minor professor (Statistics)
Charles Koll	Civil Engineering	MS	Su 2021	Minor professor (Statistics)
Jillian Cosgrove	Fisheries and Wildlife	MS	W 2021	Minor professor (Statistics)
Tho Nguyen	Biostatistics option	MPH	Sp 2020	Minor professor (Statistics)
Shane Scaggs	Anthropology	MS	F 2018	Minor professor (Integrated minor involving Statistics)
Frieda Fein	Geography	MS	Sp 2018	Minor professor (Statistics)
Tong Li	Mechanical Engineering	MEng	W 2018	Minor professor (Statistics)
Njesa Totty	Statistics	PhD	Sp 2021 – Present	Committee member
Jiarui Xu	Statistics	PhD	Su 2020 – Present	Committee member
Laura Arntson	Public Health	PhD	Sp 2019 – Present	Committee member

Rafael Robles	Psychological Science	PhD	Sp 2022	Committee Member
Matt Higham	Statistics	PhD	Sp 2019	Committee member
Faraz Niyaghi	Statistics	PhD	W 2019	Committee member
Heather Kitada	Statistics	PhD	Su 2018	Committee member
Patrick Carroll	Statistics	MS	W 2022 – Present	Committee member
Nora Quick	Data Analytics	MS	W 2022 – Present	Committee member
Mitchell Below	Data Analytics	MS	W 2022 – Present	Committee member
Zachary Haynes	Data Analytics	MS	F 2021 – Present	Committee member
Natallia Bondarava	Data Analytics	MS	Su 2021 – Present	Committee member
Tyler Stevenson	Data Analytics	MS	Su 2021 – Present	Committee member
Reid Johnson	Data Analytics	MS	Su 2021 – Present	Committee member
Justin Gibson	Data Analytics	MS	Sp 2021 – Present	Committee member
Jiefeng Chen	Data Analytics	MS	W 2021 – Present	Committee member
Nazreen Kashani	Data Analytics	MS	F 2020 – Present	Committee member
Emilee Mowlds	Fisheries and Wildlife	MS	W 2022	Committee member
Wei Zhang	Statistics	MS	W 2022	Committee member
Fengfei Zheng	Statistics	MS	W 2022	Committee member
Rory Higgins	Data Analytics	MS	F 2021	Committee member
Steven Maxwell Jr.	Data Analytics	MS	F 2021	Committee member
Alexandra Sciocchetti	Data Analytics	MS	F 2021	Committee member
Emma Grossman	Statistics	MS	Sp 2021	Committee member
Vijay Tadimeti	Computer Science	MS	W 2020	Committee member
Jimena Errazola	Statistics	MS	Sp 2020	Committee member
Kaelyn Rosenberg	Statistics	MS	Sp 2020	Committee member
Lauren Zatkos	Fisheries and Wildlife	MS	F 2019	Committee member
Andrew Anderson	Computer Science	MS	F 2019	Committee member
Munirah Alarifi	Statistics	MS	Su 2019	Committee member
Jaidev Kutty	Statistics	MS	Sp 2019	Committee member
Ashley Ordway	Statistics	MS	Sp 2019	Committee member
Erin Howard	Statistics	MS	Sp 2018	Committee member
Harris Kittner	Statistics	MS	W 2018	Committee member
Caley Johns	Statistics	MS	W 2017	Committee member
Daniel Arellano	History	PhD	Sp 2022 – Present	Graduate council representative
Jesse Andrews	Mathematics	PhD	Sp 2017 – Present	Graduate council representative
Brittany King	Fisheries and Wildlife	PhD	F 2021	Graduate council representative
Dallas Foster	Mathematics	PhD	Sp 2021	Graduate council representative
Azhar Alhammali	Mathematics	PhD	Sp 2019	Graduate council representative
William Felder	Mathematics	PhD	F 2017	Graduate council representative
Rebecca Murray	History	MS	Sp 2022 – Present	Graduate council representative
Ali Chick	Mathematics	MS	Sp 2020 – Present	Graduate council representative
Martijn Oostrom	Mathematics	MS	Su 2021	Graduate council representative
Rene Burk	Botany and Plant Pathology, Anthropology, and Geography	MAIS	F 2020	Graduate council representative
Francisco Tinoco-Pickens	Fisheries and Wildlife	MS	W 2020	Graduate council representative

[1] Co-advised with Asst. Prof. James Molyneux

[2] Co-advised with Prof. Lisa Madsen

[3] Co-advised with Prof. Virginia Lesser

* *Withdrew from program due to personal reasons*

Project involving Agricultural Sciences

Project involving DEJI

Undergraduate Honors College Students

Name	Major	Year	Role
Han Xue	Biology	Sp 2020	Thesis mentor
Benjamin Sharkansky	Mathematics	Sp 2019	Thesis mentor

Other Mentoring

Name	Major	Year	Role
Alex Antequeda Campos	Statistics (PhD student at Pontificia Universidad Católica de Chile)	F 2021 – W 2022	External Research Assistantship mentor
Mikayla Reuter	Ocean Science (Oregon State University undergraduate)	F 2020 – Sp 2021	Cooperative Institute for Marine Resource Studies (CIMRS) Fellowship mentor

B.1.vi International Teaching

Description	Topics	Time	Location
Co-Instructor at WHO Collaborating Center for HIV Surveillance, 5-day workshop	Data Analysis and Population Size Estimations using RDS Analyst	Oct 2015	Zagreb, Croatia
Co-Instructor at 4-day workshop	Interpretation and Analysis of Data from Respondent-Driven Sampling using RDS Analyst	June 2014	Hanoi, Vietnam

B.5 Other Appointments

20% of my appointment is statistical consulting and collaboration with researchers in the College of Agricultural Sciences (CAS). Formal consulting with OSU faculty is listed below, most in CAS (indicated by 🌿). Some consultations consist of a few short meetings, others are longer-term projects. In addition to the projects listed below, I have supervised 59 student consulting projects as part of the ST 407/507/509 Consulting Practicum (21 from CAS). Projects with a DEJI topic are indicated by ⚖.

Ongoing

Dates	Collaborators/Clients	Project	Tasks
🌿 W 2022 – Present	Christina Hagerty, Botany and Plant Pathology	Effect of lime application in wheat fields in the Pacific Northwest	Advice on data analysis, contributing to writing methods section of paper
Sp 2020 – Present	Jeffrey Bethel, School of Biological and Health Sciences; Benjamin Dalziel, Integrative Biology and Mathematics; Roy Haggerty, College of Science; Kathryn Higley, School of Nuclear Science and Engineering; Jane Lubchenco, Integrative Biology; F. Javier Nieto, College of Public Health and Human Sciences; Tyler Radniecki, School of Chemical, Biological, and Environmental Engineering; Justin Sanders, Carlson College of Veterinary Medicine	TRACE-COVID-19 (Team-based Rapid Assessment of Community-level coronavirus Epidemics)	Creating sampling plan and analysis for door-to-door community samples and OSU's 2020-2021 academic year on-campus testing program; analyzing data including combining wastewater, clinical, and door-to-door samples; advising on quantitative matters as needed; communication of results; general advice on statistical members for all members of the TRACE team, including advice on regression modeling, model selection, and spatial data analysis for non-TRACE projects

Su 2018 – Present	Patricia Skinkis, Horticulture; A. John Woodill, College of Earth, Ocean, and Atmospheric Sciences	Statewide Crop Load Project	Data analysis, modeling, plotting, writing methods section of papers

Completed

Dates	Collaborators/Clients	Project	Tasks
Sp 2022	Sandi Phibbs, OSU Center for Health Innovation	Evaluating the implementation of HB3352 (Healthier Oregon Program)	Advice on sampling methods and analysis for hard-to-reach populations
F 2020 – F 2021	Christina Hagerty, Botany and Plant Pathology	Reaction of winter wheat and barley to *Fusarium pseudograminearum* inoculated fields	Advice on data analysis and plotting, contributing to writing methods section of paper
Su 2018 – F 2021	Patricia Skinkis, Horticulture	Pinot noir crop estimation before lag phase	Data analysis for non-linear models, plotting, writing methods section of paper
W 2021 – Sp 2021	Denise Hynes, Health Management and Policy; Allison Myers, OSU Center for Health Innovation	Digital Healthcare Platforms to Address COVID-19 Impacts in Frontier Communities	Help writing and planning an NIH grant proposal including power calculations and experimental design for pragmatic non-randomized multi-site controlled trial
W 2021	Nicole Anderson and Jennifer Kling, Crop and Soil Science	Fine Fescue Project	Answers to questions about SAS code and models for combining multiple years of data, repeated measures
W 2017 – W 2021	Ivan Arismendi, Fisheries and Wildlife	Examining Diversity Inequities in Fisheries Science Using Publication Networks	Data collection, cleaning, analysis, modeling, plotting, co-writing paper
F 2020	Nicole Anderson and Randi Wilson, Crop and Soil Science	Analysis of Grass Seed Field Experiments	Help with R code for split-plot design
Su 2020	Chris Schachtschneider, Animal and Rangeland Sciences	Needs assessment for Umatilla and Morrow Counties	Data analysis and plotting
W 2020	Ryan Graebner, Crop and Soil Science	Combining Wheat Variety Trials Across Years	Advice on analysis methods and help with computer code
F 2016 – F 2019	Christina Hagerty, Botany and Plant Pathology	Evaluating the Effect of Tillage on Soil-Borne Wheat Pathogens in the Dryland Pacific Northwest	Advice on data collection protocol; data analysis, modeling, plotting, writing methods section of paper
F 2019	Judit Barroso, Crop and Soil Science	Effect of crop type in reducing weeks	Advice on sampling design
W 2019	Harold Bae, Biostatistics	Creating and using post-stratification weights for several surveys	Advice on methods
F 2018	Michele Wiseman, Botany and Plant Pathology	Effect of various constant temperatures on cascade powdery mildew infection, growth, and development	Help with R code
W 2018	Rory McDonnell, Crop and Soil Science	Impact of spring baiting on fall slug populations	Advice on experimental design and protocol
Sp 2017	Alan Bergmann, Environmental and Molecular Toxicology	Development of quantitative multi-analyze screen with GC-MS	Advice on model choice and interpretation

Sp 2017	Monte Mattsson, Botany and Plant Pathology	Interpretation of multiple logistic regression analyses using categorical explanatory variables	Help with model interpretation in R
Sp 2017	Marc Braverman, School of Social and Behavioral Health Sciences (joint with Virginia Lesser)	Sampling strategy for survey of health providers on chronic pain management prescription and referral practices	Advice on sampling design
W 2017	Marcelo Moretti and Lloyd Nackey, Horticulture (joint with Virginia Lesser)	Survey questionnaire about practices and needs of extension clientele	Advice on questionnaire
W 2017	Jennifer Field and Alix Robel (GRA), Environmental and Molecular Toxicology (joint with Duo Jiang and Alix Gitelman)	Characterization of the Nature and Extent of Per- and Polyfluoroalkyl Substances (PRASs) in Environmental Media at DoD Sites for Informed Decision-Making	Advice on analysis methods
F 2016	Patricia Skinkis and Alison Reeve (PhD Candidate), Horticulture	Influences of Vineyard Floor Management and Cluster Thinning on Crop Load and 'Pinot noir' Berry Composition	Help with SAS code

C. SCHOLARSHIP AND CREATIVE ACTIVITY

C.1 Publications

Bold indicates McLaughlin.
Underline indicates OSU student for whom McLaughlin was major advisor.
Wave indicates other OSU student.
* Co-first author.
Publication involving Agricultural Sciences topics.
⚖ Publication involving DEJI topics.

Refereed Publications

15. Layton, B., Kaya, D., Kelly, C., Williamson, K., Alegre, D., Bachhuber, S., Banwarth, P., Bethel, J., Carter, K., Dalziel, B., Dasenko, M., Geniza M., George, A., Girard, A.-M., Haggerty, R., Higley, K., Hynes, D., Lubchenco, J., **McLaughlin, K.R.**, Nieto, F.J., Noakes, A., Peterson, M., Piemonti, A., Sanders, J., Tyler, B., and Radniecki, T., "Evaluation of a wastewater-based epidemiological approach to estimate the prevalence of SARS-CoV-2 infections and the detection of viral variants in disparate Oregon communities at city and neighborhood scales." Accepted to *Environmental Health Perspectives*.

    Role: McLaughlin was lead statistical author and performed statistically-intensive parts of analysis and wrote descriptions of that in the paper. McLaughlin advised on other parts of analysis and study design for the community samples presented. Authors are alphabetical after first four.

14. Skinkis, P.A. and **McLaughlin, K.R.** (2022), "Pinot noir crop estimation method allows growers to estimate yields earlier than lag phase," *Catalyst: Discovery into Practice*, 6(1):30-37. [link]

    Role: McLaughlin advised on data analysis methods, fit non-linear models, and contributed to writing and editing the manuscript. McLaughlin was first statistical author.

13. **McLaughlin, K.R.** (2022), "A Bayesian framework for modeling the preferential recruitment process in respondent-driven sampling," *Statistical Modelling*, 22(3):153-174. [link]

Role: McLaughlin developed methodology, wrote code, performed simulations, analyzed data, produced figures, and wrote and edited the manuscript.

12. Johnston, L.G., **McLaughlin, K.R.**, Gios, L., Cordioli, M., Staneková, D.V., Blondeel, K., Toskin, I., Mirandola, M., and the SIALON II Network (2021), "Populations size estimations using SS-PSE among men who have sex with men in four European cities: How many MSM are living with HIV?" *European Journal of Public Health*, 31(6):1129-1136. [link]

Role: McLaughlin performed majority of statistical analysis and contributed to writing and revisions. McLaughlin was first statistical author.

11. Hagerty, C.H., **McLaughlin, K.R.**, Kroese, D.R., and Lutcher, L.K. (2021), "Phosphorus supply does not affect Fusarium crown rot of winter wheat," *PhytoFrontiers*, 1(4):354-358. [Editor's Pick] [link]

Role: McLaughlin contributed to statistical analysis and manuscript revisions. McLaughlin was first statistical author.

10. Arismendi, I., **McLaughlin, K.R.**, and Penaluna, B.E. (2021), "The U.S. academic fisheries co-authorship network under the lens of diversity and inclusion," *Fisheries*, 46(8):372-382. [Featured Article] [link]

Role: McLaughlin helped collect data, performed data cleaning and quality control checks, analyzed data, created half the plots and tables, wrote the methods section of the manuscript, and contributed to editing. McLaughlin was first statistical author.

9. Hagerty, C.H., Lutcher, L.K., **McLaughlin, K.R.**, Hayes, P., Garland-Campbell, K., Paulitz, T., Graebner, R.C., and Kroese, D.R. (2021), "Reaction of winter wheat and barley cultivars to *Fusarium pseudograminearum*-innoculated fields in the dryland Pacific Northwest, USA," *Agrosystems, Geosciences & Environment*, 4(2):e20173. [link]

Role: McLaughlin contributed to statistical analysis. McLaughlin was first statistical author.

8. Scaggs, S.A., Gerkey, D., and **McLaughlin, K.R.** (2021), "Linking subsistence harvest diversity and productivity to adaptive capacity in an Alaskan food sharing network," *American Journal of Human Biology*, 33(4):e23573. [link]

Role: McLaughlin advised on analysis and methodology, edited manuscript. McLaughlin was first statistical author.

7. Yin, C., **McLaughlin, K.R.***, Paulitz, T.C., Kroese, D.R., and Hagerty, C.H. (2020), "Population dynamics of wheat root pathogens under different tillage systems in NE Oregon," *Plant Disease*, 104:2649-2657. [link]

Role: McLaughlin advised on data collection protocol and data analysis methods, fit models, wrote methods section of the manuscript, and contributed to editing. McLaughlin was first statistical author.

6. **McLaughlin, K.R.**, Johnston, L.G., Gamble, L.J., Grigoryan, T., Papoyan, A., and Grigoryan, S. (2019), "Population size estimations among hidden populations using respondent-driven sampling surveys: Case studies from Armenia," *JMIR Public Health and Surveillance*, 5(1):e12034. [link]

Role: McLaughlin developed the method, fit models, advised PhD student Laura Gamble on producing figures and diagnostics, and wrote all sections of manuscript except introduction.

5. Reeve, A.L., Skinkis, P.A., Vance, A.J., **McLaughlin, K.R.**, Tomasino, E., Lee, J., and Tarara, J.M. (2018), "Vineyard floor management and cluster thinning inconsistently affect 'Pinot noir' crop load, berry composition, and wine quality," *HortScience*, 53(3):318-328. [link]

Role: McLaughlin advised on data analysis and participated in manuscript editing and responding to review. McLaughlin was first statistical author.

4. **McLaughlin, K.R.** and EmBree, J.D. (2018), "Empirical assessment of programs to promote collaboration: A network model approach," *The Annals of Applied Statistics*, 12(1):654-682. [link]

   Role: McLaughlin co-developed methodology, co-designed survey, entered and cleaned data, performed simulations and analysis, made figures, and wrote and edited manuscript.

3. Johnston, L.G., **McLaughlin, K.R.**, Rouhani, S.A., and Bartels, S.A. (2017), "Measuring a hidden population: A novel technique to estimate the population size of women with sexual violence related pregnancies in South Kivu Province, Democratic Republic of Congo," *Journal of Epidemiology and Global Health*, 7(1):45-53. [link]

   Role: McLaughlin performed data analysis, created figures and summaries, and co-wrote manuscript. McLaughlin was first statistical author.

2. Johnston, L.G., **McLaughlin, K.R.**, El Rhilani, H., Latifi, A., Toufik, A., Bennani, A., Alami, K., Elomari, B., and Handcock, M.S. (2015), "A novel method for estimating the size of hidden populations using respondent-driven sampling data: Case examples from Morocco," *Epidemiology*, 26(6):846-852. [link]

   Role: McLaughlin co-developed methodology, performed data analysis, created figures and summaries, and led writing of manuscript. McLaughlin was first statistical author.

1. Sholtz, R.I., **McLaughlin, K.R.**, Cirillo, P.M., Petreas, M., Park, J.S., Wolff, M.S., Factor-Litvak, P., Eskenazi, B., and Cohn, B.A. (2011), "Assaying organochlorines in archived serum for a large, long-term cohort: Implications of combining assay results from multiple laboratories over time," *Environment International*, 37(4):709-714. [link]

   Role: McLaughlin merged and cleaned data, performed analysis, and co-wrote manuscript. McLaughlin was first statistical author.

Book Chapters

1. McLaughlin, K.R. "Collecting Data from Networked populations: Snowball and Respondent-driven Sampling." *The Handbook of Teaching Qualitative & Mixed Research Methods: A Step-by-Step Guide for Instructors*, edited by Alissa Ruth, Amber Wutich, and H. Russell Bernard, Routledge. [*my chapter submitted; book still in production*]

Conference/Workshop Proceedings

2. National Academies of Sciences, Engineering, and Medicine (2018), *Improving Health Research on Small Populations: Proceedings of a Workshop*. Washington, DC: The National Academies Press.

1. **McLaughlin, K.R.**, Handcock, M.S., and Johnston, L.G. (2015), "Inference for the visibility distribution for respondent-driven sampling," *JSM Proceedings*, Alexandria, VA: American Statistical Association, 2259-2267.

Technical Reports

2. Kroese, D.R., **McLaughlin, K.R.**, and Hagerty, C.H. (2017), "Evaluating the effect of tillage on soil-borne wheat pathogens in the dryland Pacific Northwest," *2017 Dryland Field Day Abstracts: Highlights of Research Progress*.

1. **McLaughlin, K.R.** and Stark, P.B. (2011), "Workload estimates for risk-limiting audits of large contests," *University of California, Berkeley Honors Thesis in Statistics*.

C.2 Presentations to Peers

AAPOR = American Association of Public Opinion Research
ASA = American Statistical Association
CDC = Centers for Disease Control and Prevention
JSM = Joint Statistical Meetings
WHO = World Health Organization

Invited Research Seminars

Date	Title	Event/Location
Oct 2021	TRACE COVID Community Surveillance Project [with Jeff Bethel and Tyler Radniecki]	Center for Quantitative Life Sciences (CQLS) Seminar Series, Oregon State University, Corvallis, Oregon, USA [virtual]
Jan 2021	Statistics in the TRACE-COVID-19 Project	Department of Statistics Seminar, Oregon State University, Corvallis, Oregon, USA [virtual]
Mar 2020	Estimating the Size of Hidden Populations using Respondent-Driven Sampling	Jim Albaugh Mathematics Colloquium, Willamette University, Salem, Oregon, USA
Nov 2019	Visibility Imputation for Population Size Estimation Using Respondent-Driven Sampling	Applied Mathematics and Computation Seminar, Oregon State University, Corvallis, Oregon, USA
Aug 2019	Visibility Imputation for Population Size Estimation Using Respondent-Driven Sampling	Pontificia Universidad Católica de Chile Seminario de Estadística, Santiago, Chile
May 2019	Visibility Imputation for Population Size Estimation Using Respondent-Driven Sampling	Portland State University Maseeh Mathematics and Statistics Colloquium Series, Portland, Oregon, USA
Jan 2019	Estimating the Size of Hidden Populations Using Respondent-Driven Sampling	Oregon State University College of Public Health & Human Sciences Research Seminar, Corvallis, Oregon, USA
Feb 2017	Accessing Hidden Populations Using Respondent-Driven Sampling	Reed University Seminar Series, Portland, Oregon, USA

Invited Speaker (National)

Date	Title	Event/Location
Feb 2022	Statistics in the TRACE-COVID-19 Project	ASA Oregon Chapter Spring Meeting [virtual]
May 2021	Advances in Population Size Estimation for RDS Using SS-PSE	Expert Consultation on Key Population Surveillance and Estimates: Recent Advances and Future Directions, CDC, Atlanta, Georgia, USA [virtual]
June 2020	Developments in Respondent-Driven Sampling Diagnostics	AAPOR Annual Conference, Invited Panel on Respondent-Driven Sampling: Breakthroughs and Challenges in Implementation, Estimation, and Inference [virtual]
June 2019	A Bayesian Framework for Modeling the Preferential Recruitment Process in Respondent-Driven Sampling to make Inference about Hidden Populations	Western North American Region of the International Biometric Society (WNAR of IBS) Annual Meeting, Portland, Oregon, USA
Sept 2018	Modeling Preferential Recruitment for Respondent-Driven Sampling	CDC Expert Consultation on Advancing Methods for Biobehavioral Surveys for Key Populations, Atlanta, Georgia, USA
Jan 2018	Estimating the Size of Hidden Populations	National Academies of Sciences, Engineering, and Medicine Committee on National Statistics (CNSTAT) Workshop on Improving Health for Small Populations, Washington, D.C., USA

Oct 2017	Models for the Respondent-Driven Sampling Recruitment Process	ASA Oregon Chapter Fall Meeting, Corvallis, Oregon, USA
July 2017	Statewide Crop Load Project: Five Years of Data	Statewide Crop Load Project Annual Collaborator Meeting, Yamhill County Extension Office, Oregon, USA
April 2017	Accessing Hidden Populations at High-Risk for HIV/AIDS Using Respondent-Driven Sampling	Center for Genome Research and Biocomputing (CGRB) Spring Conference, Corvallis, Oregon, USA

Invited Speaker (International)

Aug 2016	Analysis of Networks with Missing Data with Application to the National Longitudinal Study of Adolescent Health	Network Science and its Applications Workshop, Isaac Newton Institute, Cambridge, United Kingdom
May 2015	Sequential Sampling-Population Size Estimation (SS-PSE)	3rd Global HIV Surveillance Consultation, Bangkok, Thailand

Contributed Presentations (National)

Date	Title	Event/Location
Aug 2022	Targeted Random Door-To-Door Sampling Design for COVID-19 Informed by Community Wastewater	Contributed talk at JSM, Session on COVID-19 and Survey Research Methods, Washington, D.C., USA
Aug 2019	Visibility Imputation for Population Size Estimating using Respondent-Driven Sampling	Contributed talk at JSM, Session on Nonresponse Errors and Fixes, Denver, Colorado, USA
Aug 2017	Empirical Assessment of Programs to Promote Collaboration: A Network Model Approach	Topic-contributed talk at JSM, Session on Advances in Inference on Networks, Baltimore, Maryland, USA
July 2017	Modeling Preferential Recruitment for Respondent-Driven Sampling	Institute of Mathematical Statistics New Researcher's Conference, Baltimore, Maryland, USA
May 2017	Visibility Imputation for Respondent-Driven Sampling	AAPOR Annual Conference, New Orleans, Louisiana, USA
Jan 2017	Inference for the Visibility Distribution for SS-PSE	Consultation on Estimating the Size of Key Populations in Resource-Limited Settings, CDC, Atlanta, Georgia, USA
Aug 2016	Using Respondent-Driven Sampling to Access Hidden Populations: Current Research	International Indian Statistical Association (IISA) International Conference on Statistics, Corvallis, Oregon, USA
Aug 2016	Using Respondent-Driven Sampling to Access Hidden Populations: Current Research	Topic-contributed talk at JSM, Joint Survey Research Methods, Social Statistics, and Government Statistics Sections Student Paper Award Session, Chicago, Illinois, USA
April 2016	Modeling Preferential Recruitment for Respondent-Driven Sampling	International Network of Social Network Analysis (INSNA) Sunbelt Conference, Newport Beach, California, USA
Aug 2015	Inference for the Visibility Distribution of RDS	Contributed talk at JSM, Session on Society and Networks, Seattle, Washington, USA

Contributed Presentations (International)

Date	Title	Event/Location
May 2019	Visibility Imputation for Population Size Estimating using Respondent-Driven Sampling	AAPOR Annual Conference, Toronto, Ontario, Canada
July 2018	Preferential Recruitment Modeling for Respondent-Driven Sampling	Contributed talk at JSM, Session on Advances in Sampling Techniques and Tools, Vancouver, British Columbia, Canada

Other Presentations (listed co-author but not presenter)

Date	Title	Event/Location
June 2022	Wastewater Based Epidemiology Meets Public Health in Practice: Lessons Learned from the Field (presenter: Tyler Radniecki)	Association of Environmental Engineering and Science Professors (AEESP) Research and Education Conference, St. Louis, Missouri, USA
June 2022	Wastewater Based Epidemiology: Monitoring the Spread of SARS-CoV-2 Variants (presenter: Devrim Kaya)	Association of Environmental Engineering and Science Professors (AEESP) Research and Education Conference, St. Louis, Missouri, USA
Oct 2021	Use of wastewater viral RNA levels of sars-cov-2 to predict community prevalence (presenter: Jeffrey Bethel)	American Public Health Association (APHA) Annual Meeting and Expo, Denver, Colorado, USA and Online
Oct 2021	Team-based rapid assessment of community-level coronavirus epidemics (TRACE): A community-based approach to estimate the prevalence of sars-cov-2 infection (presenter: Jeffrey Bethel)	American Public Health Association (APHA) Annual Meeting and Expo, Denver, Colorado, USA, and Online
Aug 2021	Improved Pinot Noir Yield Estimation Method Allows Earlier Crop Forecasting (presenter: Patricia Skinkis)	American Society for Horticultural Science (ASHS) Annual Conference, Denver, Colorado, USA
Feb 2021	SARS-CoV-2 is more prevalent in wastewater from low-income neighborhoods and cities than high-income neighborhoods and cities (presenter: Devrim Kaya)	American Water Works Association (AWWA) Virtual Summit on Sustainable Water, PFAS, and Waterborne Pathogens [virtual]
Aug 2019	Assessing SS-PSE Hidden Population Size Estimation: Case Studies from Armenia (presenter: Laura Gamble)	AAPOR Annual Conference, Toronto, Ontario, Canada

Underline indicates OSU student for whom McLaughlin was major advisor.

C.3 Grant and Contract Support

Project involving Agricultural Sciences topics.
⚖ Project involving DEJI topics.

Active

Title	PI	McLaughlin's Role	Source of Support	Total Budget Amount	Budget for McLaughlin	Dates
Scaling the TRACE Project with a Coordinating Center	Benjamin Dalziel (Integrative Biology/ Mathematics), Oregon State University	Co-PI	David and Lucile Packard Foundation	$2,000,000	$32,906 (2.4 months + OPE)	11/2/20 – 11/1/22
⚖ Testing Current Methods in the Estimation of Human Trafficking Prevalence: A Collective Impact Approach	David Okech (School of Social Work), University of Georgia	Sub-contract/ consultant	U.S. Department of State, Office to Monitor and Combat Trafficking in Persons	$15,750,000	$126,450 (6.0 months + OPE + F&A)	10/1/19 – 9/30/23

Completed

Title	PI	McLaughlin's Role	Source of Support	Total Budget Amount	Budget for McLaughlin	Dates
TRACE: Team-based Rapid Assessment of Community-level Coronavirus Epidemics (Expansion)	Benjamin Dalziel (Integrative Biology/ Mathematics), Oregon State University	Co-PI	David and Lucile Packard Foundation	$400,000	$22,920 (1.0 months + OPE + 1 course buyout)	2020-2022
TRACE: Team-based Rapid Assessment of Community-level Coronavirus Epidemics	Benjamin Dalziel (Integrative Biology/ Mathematics), Oregon State University	Co-I	David and Lucile Packard Foundation	$750,000	$17,139 (1.25 months + OPE)	4/20/20 – 4/3/21
Estimating the Number of People Who Inject Drugs in Metropolitan Areas of the United States: A Collaboration with the Centers for Disease Control and Prevention	Katherine McLaughlin	PI	Oregon State University, College of Science SciRIS-II	$10,000	$10,000	2/1/20 – 1/31/21
RipStream Analysis and Reforestation Implementation Study	Lisa Madsen (Statistics), Oregon State University	Co-PI	Oregon Department of Forestry	$7,619	$2,405	4/25/19 – 6/30/19
Statewide Crop Load Project: A Researcher-Industry Partnership to Understand the Yield-Quality Relationship in Cool Climate Pinot noir and Chardonnay	Patricia Skinkis (Horticulture), Oregon State University	Co-PI	American Vineyard Foundation	$47,000	$3,134	2018 – 2019
Evaluating the Effect of Tillage on Soil-borne Wheat Pathogens in the Six Agronomic Zones of the Dryland Pacific Northwest	Christina Hagerty (Botany and Plant Pathology), Oregon State University	Co-PI	Oregon Wheat Commission	$20,000	$2,179	2017 – 2018
Statewide Crop Load Project: A Researcher-Industry Partnership to Understand the Yield-Quality	Patricia Skinkis (Horticulture), Oregon State University	Co-PI	Oregon Wine Board	$45,998	$2,179	2017 – 2018

Relationship in Cool Climate Pinot noir and Chardonnay						

D. SERVICE

⚖ Service with a role or topic related to DEJI.

D.1 University Service

Department

	F 2021 – Present	Tenure Track Search Committee
⚖	F 2020 – Present	Equity, Inclusion, and Justice (EIJ) Committee (Chair)
	F 2020 – Sp 2021	Graduate Committee
	F 2019 – Sp 2021	P&T Guidelines Committee
	F 2018	Department Head Search Committee
	F 2017 – W 2018	Tenure Track Search Committee
⚖	F 2017 – W 2018	Office Manager Search Committee (Search Advocate)
	F 2016 – Sp 2019	Website Committee (Lead)
	F 2016 – Sp 2018	Library Committee
	F 2016 – Sp 2018	Computer Committee
	F 2014 – F 2015	UCLA Statistics Graduate Student Association (President)

College of Science

⚖	F 2021 – Present	Equity, Access, and Inclusion (EAI) Leadership Council
	F 2018 – Present	Dean's Advisory Council
	W 2022	Faculty/Staff Awards Selection Committee
⚖	F 2020 – Sp 2021	Diversity, Equity, Justice, and Inclusion (DEJI) Committee
	W 2021	Faculty/Staff Awards Selection Committee

University

F 2021 – Present	Tenure Track Search Committee for Health Management and Policy, College of Public Health and Human Sciences
Su 2020 – Present	Co-PI of Team-based Rapid Assessment of Community-level Coronavirus Epidemics (TRACE) Project
Sp 2017	SURE: Science Review Committee
F 2013 – Sp 2016	UCLA Math and Physical Sciences Council (MPSC) Secretary (2013-2014) Internal President (2014-2015)

D.2 Service to the Profession

2022	Panelist, National Science Foundation Referee, International Journal of Health Policy and Management Referee, Journal of Survey Statistics and Methodology Referee, Journal of the Royal Statistical Society Series A
2021	Judge, Willamette University DataFest Referee, International Journal of Health Policy and Management Referee, Journal of Survey Statistics and Methodology
2020	Referee, Science Advances Referee, JMIR Public Health and Surveillance
2019	Panelist, National Science Foundation (topic 1) Panelist, National Science Foundation (topic 2) Referee, Journal of Agricultural, Biological, and Environmental Statistics Referee, Journal of the Royal Statistical Society Series A Referee, Statistics in Medicine Referee, Involve

	Referee, JMIR Public Health and Surveillance Session chair, Joint Statistical Meetings, Denver, Colorado
2018	Referee, JMIR Public Health and Surveillance Referee, Journal of Urban Health Session chair, Joint Statistical Meetings, Vancouver, British Columbia, Canada
2017	Session chair, Joint Statistical Meetings, Baltimore, Maryland
2015	Data Manager, American Statistical Association DataFest
2014	Data Manager, American Statistical Association DataFest Organizing Committee Member, UseR! Conference

D.3. Service to the Public

⚖	2021	Panelist, Women in Leadership: Achieving an Equal Future in a COVID-19 World (College of Science panel in honor of International Day of Women and Girls in Science) [info]
	2020 – 2021	Content creation and editing for Team-based Rapid Assessment of Community-level Coronavirus Epidemics (TRACE) infographics for the public [prevalence, sampling, and uncertainty]
⚖	2020	Math/Statistics Activity Facilitator, Discovering the Scientist Within Outreach Event [info]
⚖	2013, 2014	Organizing chair for Statistics, Exploring Your Universe Outreach Event [info]

E. AWARDS

E.1 National and International

2016	JSM Joint Survey Research Methods, Social Statistics, and Government Statistics Sections Student Paper Award ($800)
2016	JSM Survey Research Methods Section Student Travel Award ($800)
2012-2015	National Science Foundation Graduate Research Fellowship (GRFP) (Awarded 2011; $32,000/year)

E.3 University and Community

2020	Oregon State University Beaver Champion Award (shared, as a co-PI of the TRACE-COVID-19 Project) [info]
2020	Oregon State University Loyd F. Carter Award for Outstanding and Inspirational Teaching in Science (Graduate) [info]
2015-2016	UCLA Dissertation Year Fellowship ($20,000)
2015	UCLA Jeffrey L. Hanson Distinguished Service Award (Finalist)
2013	UCLA Most Promising Applied Statistician
2011-2012	UCLA Chancellor's Prize Fellowship ($10,000)
2010	UC Berkeley VIGRE NRT