Eric S. Kawaguchi

Division of Biostatistics
Department of Population and Public Health Sciences
Keck School of Medicine
University of Southern California
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Los Angeles, CA 90032

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Appointments:

University of Southern California   2020 - Present
Division of Biostatistics
Postdoctoral Fellow: NIH T32ES013678-11A1

Education:

University of Southern California   2019 - 2020
Division of Biostatistics
Postdoctoral Research Associate: NIH P01CA196569-05

University of California, Los Angeles   2015 - 2019
Ph.D. Biostatistics
Dissertation Title: Scalable Methods for Big Time-to-Event Data
Chair: Dr. Gang Li

University of California, Los Angeles   2013 - 2015
M.S. Biostatistics
Academic Advisor: Dr. Gang Li

California State Polytechnic University, Pomona   2009 - 2013
B.S. Mathematics, Statistics emphasis.

Research Experience:

USC COVID-19 Pandemic Research Center   November 2020 - Present
Research Associate - Biostatistician/ Data Scientist

Los Angeles Cancer Surveillance Program at USC   January 2020 - Present
Biostatistics Consultant

University of California, Los Angeles   May 2014 - June 2019
Graduate Student Researcher

Kite Pharma   January 2018 - June 2018
Contract Statistician

Kite Pharma   June 2018 - September 2018

Summer Intern

Kite Pharma   June 2017 - September 2017
Summer Intern

Boston Scientific   June 2016 - September 2016
Summer Intern

Iowa Summer Institute in Biostatistics   Summer 2012
Summer Research Assistant

Teaching Experience:

Guest Lecturer   Spring 2021/Fall 2021
Division of Cardiovascular Medicine
Keck School of Medicine at USC

Guest Lecturer   Spring 2021
EH530: Environmental and Occupational Epidemiology
Instructor: Dr. Matthew Gribble (Emory University)

Lecturer   Summer 2020/2021
R Bootcamp for Scientific Computing at USC

Guest Lecturer   Spring 2020
Analytical Support Group Meetings
Los Angeles County Cancer Surveillance Program at USC

Guest Lecturer   Spring 2020
PM 591: Machine Learning for Heath Sciences
Instructor: Dr. Juan Pablo Lewinger

Short Course Co-Instructor/Aide   Summer 2018
2018 Joint Statistical Meetings
Short Course: Joint Modeling of Longitudinal and Time-to-Event Data

Teaching Assistant   Fall 2015/2016/2017/2018
BIOS M215: Survival Analysis
Instructor: Dr. Gang Li

Grader   Winter 2017
BIOS 255B: Advanced Mathematical Statistics
Instructor: Dr. Dorota Dabrowska

Grader   Fall 2016
BIOS 255A: Advanced Topics in Probability
Instructor: Dr. Dorota Dabrowska

Teaching Assistant   Winter 2016
BIOS 200C: Biostatistics
Instructor: Dr. Weng Kee Wong

Teaching Assistant   Summer 2015

BIOS 100A: Introduction to Biostatistics
Instructor: Dr. David Gjertson

ADVISING:

Master's Students at UCLA
Shanpeng Li
Caesar Z. Li
Mitchell Schepps
Darrick Shen

Master's Students at USC
Steven Balog

ACADEMIC SERVICES:

Southern California Chapter of the ASA (SCASA):
Member (2013 - Present)
VP of Academic Affairs in Biostatistics and Epidemiology (2020-Present)

Referee/Reviewer:
Biometrics
Geographical Analysis
Journal of Neuro-Oncology
Journal of the Royal Statistical Society: Series B
TEST
Nature Communications
Mathematics
Communications in Statistics - Simulation and Computation
Statistics in Medicine
Biostatistics

Presentations:
UCLA Datafest 2017 Volunteer/VIP
Cal Poly Pomona Hi-5 Math Event Speaker (2015)

SELECTED HONORS AND AWARDS:

Dean's Outstanding Student Award	June 2019
SDSS 2019: Student & Early Career Travel Award	April 2019
Dissertation Year Fellowship	June 2018
LIDA 2017: Student/Post-Doc Poster Award	May 2017
Amgen Pre-Doctoral Fellowship	April 2017

PRESENTATIONS:

1. Kawaguchi, E.S.*, Suchard M. A., Liu, Z., Li, G. *Sparse Cox's Regression via Broken Adaptive Ridge.* Poster. 2017 Conference on Lifetime Data Science. Storrs, Connecticut.

2. Kawaguchi, E.S.*, Shen J.I., Li, G., Suchard, M.A. *A Scalable Estimation Procedure for Competing Risks Data.* Contributed. 2019 Statistics and Data Science Symposium. Bellevue, Washington.

3. Kawaguchi, E.S.*, Shen J.I., Suchard M.A., Li, G. *A Fast and Scalable Sparse Regression Method for Competing Risks Data.* Contributed. 2019 Joint Statistical Meetings. Denver, Colorado.

4. Kawaguchi, E.S.*, Shen J.I., Suchard M.A., Li, G. *A Fast and Scalable Sparse Regression Method for Competing Risks Data.* Contributed. 2019 Cal Poly Pomona Department of Mathematics and Statistics Colloquium. Pomona, California.

5. Kawaguchi, E.S.*, Kim A.E.*. *Exploring COVID-19 Data and Its Impact on LA County and USC.* Virtual. UC Merced Department of Public Health Seminar.

6. Kawaguchi, E.S.*, Shen J.I., Li, G., Suchard M.A. *Scalable Algorithms for Large-Scale Competing Risks Data.* Topic-Contributed. 2021 Joint Statistical Meeting. Seattle, Washington. (Virtual)

7. Kawaguchi, E.S.*, Li, G. Lewinger, J., Gauderman W.J. *Two-stage hypothesis testing for right-censored data.* Invited. The 34th New England Statistics Symposium. Providence, Rhode Island. (Virtual)

   * denotes presenter.

PUBLICATIONS (METHODOLOGICAL):

1. **Kawaguchi E.S.**, Li G., Lewinger J., Gauderman W.J. (2021) *Two-step hypothesis testing to detect gene-environment interactions in a genome-wide scan.* Statistics in Medicine. Status: Major revisions

2. **Kawaguchi E.S.**, Li S., Weaver G.M., Lewinger J. (2021) *Hierarchical ridge regression for incorporating genomic meta features.* Journal of Data Science. Status: Recently accepted

3. **Kawaguchi E.S.**, Darst B.F., Wang K., Conti, D.V. (2021) *Sign-based shrinkage based on an asymmetric LASSO penalty.* Journal of Data Science. doi.org/10.6339/21-JDS1015

4. Li C.Z., **Kawaguchi E.S.**, Li G. (2021) *A new ℓ_0-regularized log-linear Poisson graphical model for RNAseq gene expression data.* Journal of Computational Biology. doi.org/10.1089/cmb.2020.0558

5. Li N., Peng X., **Kawaguchi E.S.**, Suchard M.A., Li G. (2021) *A scalable surrogate ℓ_0 sparse regression method for generalized linear models with applications to large scale data.* Journal of Statistical Planning and Inference. 213, 262–281. doi.org/10.1016/j.jspi.2020.12.001

6. **Kawaguchi E.S**., Shen, J.I., Li G, Suchard, M.A. (2021) *A Fast and Scalable Implementation Method for Competing Risks Data with the R package fastcmprsk.* The R Journal. doi.org/10.32614/RJ-2021-010

7. **Kawaguchi E.S.**, Shen J.I, Suchard M.A., Li G. (2020) *Scalable Algorithms for Large Competing Risks Data.* Journal of Computational and Graphical Statistics. doi.org/10.1080/10618600.2020.1841650

8. **Kawaguchi E.S.**, Suchard, M.A., Liu Z., Li G. (2020) *A surrogate ℓ_0 sparse Cox's regression with applications to sparse high-dimensional massive sample size time-to-event data.* Statistics in Medicine. 39(6) 675–686. doi.org/10.1002/sim.8438.

Publications (Collaboration):

1. Lee R.C., Hu H., **Kawaguchi E.S.**, Kim A.E., Soto D.W., Shanker K., Kalusner J.D., Van Orman S., Ghanem-Uzqueda A., Unger J.B. (2021) *COVID-19 booster vaccine attidues and behaviours among university students and staff: the USC Trojan Pandemic Research Initiative.* To be submitted to American Journal of Preventive Medicine.

2. Nicolo M., **Kawaguchi E.S.**, Ghanem-Uzqueda A., Kim A.E., Soto D., Deva S., Shankar K., Rogers C., Lee R., Gilliland F., Klausner J., Kovas A., Conti D.V., Hu H., Unger J.B. (2021) *Characteristics associated with COVID-19 vaccination status among staff and faculty of a large, diverse University in Los Angeles.* Submitted Preventive Medicine.

3. Nicolo M., **Kawaguchi E.S.**, Ghanem-Uzqueda A., Kim A.E., Soto D., Deva S., Shankar K., Rogers C., Lee R., Gilliland F., Klausner J., Kovas A., Conti D.V., Hu H., Unger J.B. (2021) *Correlates of COVID-19 vaccination status among college students.* Submitted to Journal of American College Health.

4. Wolfson A.M., Depasquale E.C., Starnes V.A., Cunningham M., Baker C., Lee R., Bowdish M., Fong M.W., Rahman J., Pandya K., Lewinger J., **Kawaguchi E.S.**,Vaidya A.S. (2021) *Effect of UNOS policy change and exception status request on outcomes in patients bridged to heart transplant with an intra-aortic balloon pump.* Artificial Organs. doi.org/10.1111/aor.14109

5. Lee E., **Kawaguchi E.S.**, Zhang J., Kim S.E., Deapen D., Liu L., Sheidaee N., Hwang A., Kang I., Sandhu K., Ursin G., Wu A.H., Garcia A. (2021) *Bariatric surgery in breast and endometrial cancer patients in California: Population-based prevalence and survival.* Surgery for Obesity and Related Diseases. doi.org/10.1016/j.soard.2021.09.017

6. Tilley K., Martinez L., Ayvazyan A., Nanda N., **Kawaguchi E.S.**, O'Gorman M., Conti D.V., Gauderman W.J., Van Orman S. (2020) *A Cross-Sectional Study Examining the Seroprevalence of SARS-CoV-2 Antibodies in a University Student Population.* Journal of Adolescent Health. 67(6) 763–768. doi.org/10.1016/j.jadohealth.2020.09.001

7. Cloughesy T.F., Mochizuki A.Y,. Orpilla J.R., Hugo W, Lee A.H., Davidson T.B., Wang AC, Ellingson B.M., Rytlewksi J.A., Sanders C.M., **Kawaguchi E.S.**, Du L, Li G, Yong W.H., Gaffey S.C., Cohen A.L., Mellinghoff I.K., Lee E.Q., Reardon D.A., O'Brien B.J., Butowski N.A., Nghiemphu P.L., Clarke J.L., Arrillaga-Romany I.C., Colman H, Kaley T.J., de Groot J.F., Liau L.M., Wen P.Y., Prins R.M. (2019) *Neoadjuvant anti-PD-1 immunotherapy promotes a survival benefit with intratumoral and systemic immune responses in recurrent glioblastoma.* Nature Medicine. 25(3) 477–486.

Affiliations:

American Statistical Association, Southern California Chapter Member (Student)
International Biometric Society, Member (Student)
UCLA FSPH Equity, Diversity, and Inclusion Committee (Biostatistics Student Representative)

Language Skills:

- English: Fluent

- Japanese: Conversational

Computing Skills:

- Operating Systems: Windows, Mac OS X

- Software and Programming Languages: R, SAS, C, C++, Stata, Julia, PASS, JAGS

- Typesetting: LaTeX