Alfonso Landeros

CONTACT INFORMATION

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ACADEMIC POSITIONS

Postdoctoral Scholar @ University of California, Los Angeles — April 2021 – Present

EDUCATION

University of California, Los Angeles, Los Angeles, CA

Ph.D. Biomathematics, — March 2021

University of California, Los Angeles, Los Angeles, CA

B.S. Mathematics/Applied Science, Specialization in Computing, — June 2013

REFEREED JOURNAL PUBLICATIONS

[1] **Landeros A**, Lange K.
"Algorithms for Sparse Support Vector Machines." (**Accepted**)
Journal of Computational and Graphical Statistics, 2022.

[2] **Landeros A**, Padilla OHM, Zhou H, Lange K.
"Extensions to the Proximal Distance Method of Constrained Optimization."
Journal of Machine Learning Research, 2022.

[3] Mester R, **Landeros A**, Rackauckas C, Lange K.
"Differential Methods for Assessing Sensitivity in Biological Models."
PLoS Computational Biology, 2022. doi:10.1371/journal.pcbi.1009598

[4] **Landeros A**, Ji X, Lange K, Stutz TC, Xu J, Sehl ME, Sinsheimer JS.
"An examination of school reopening strategies during the SARS-CoV-2 pandemic."
PLOS ONE, 2021. doi:10.1371/journal.pone.0251242.

[5] Stutz TC, **Landeros A**, Xu J, Sinsheimer JS, Sehl M, Lange K.
"Stochastic simulation algorithms for Interacting Particle Systems."
PLOS ONE, 2021. doi:10.1371/journal.pone.0247046.

[6] **Landeros A**, Stutz T, Keys KL, Alekseyenko A, Sinsheimer JS, Lange KL, Sehl ME.
"BioSimulator.jl: Stochastic simulation in Julia."
Computer Methods and Programs in Biomedicine, 2018. doi:10.1016/j.cmpb.2018.09.009.

[7] Sehl ME, Shimada M, **Landeros A**, Lange KL, Wicha MS.
"Modeling of Cancer Stem Cell State Transitions Predicts Therapeutic Response."
PLOS ONE, 2015. doi:10.1371/journal.pone.0135797.

BOOK CHAPTERS

[8] Lange K, Won J-H, **Landeros A**, Zhou H.
"Nonconvex Optimization via MM Algorithms: Convergence Theory."
In: *Wiley StatsRef: Statistics Reference Online*, 2021.
doi:10.1002/9781118445112.stat08295.

PREPRINTS

[9] **Landeros A**, Wu TT, Lange K.
"Sparse Vertex Discriminant Analysis: Feature Selection for Biomedical Classification Applications."
Submitted, 2022.

IN PREPARATION

[10] **Landeros A**, Liu W, Sehl M, Tamori Y, Deng W, and Ji X.
"Lattice-based Mathematical Models of Cancer Cell Competition in Drosophila."

[11] **Landeros A**, Padilla OHM, Zhou H, Zhou J, Lange K.
"Hierarchical Regression Modelling for Integrating Genomics Data."

AWARDS

T32 Predoctoral Training Grant 2017-2019
National Human Genome Research Institute

Carol Newton Travel Award 2016
UCLA Biomathematics

INVITED PRESENTATIONS

Markov Jump Processes April 2022
Invited lecture for a graduate-level course on mathematical oncology.

Software Tools for Reproducible Research Feb 2022
Invited lecture for UCLA graduate-level career development course.

Techniques and Algorithms for Simulating Stochastic Processes March 2021
Invited lecture for a graduate-level applied probability course at UCLA.

An Examination of School Reopening Strategies March 2021
Invited virtual presentation for Tulane University Mathematics Department.

Markov Jump Processes April 2020
Invited lecture for a graduate-level course on mathematical oncology.

BioSimulator: Fast stochastic simulation in Julia Feb 2020
Part of UCLA QCBio winter quarter luncheon series.

Software Tools for Reproducible Research Feb 2020
Invited lecture for UCLA graduate-level career development course.

BioSimulator.jl: Stochastic Simulation in Julia JuliaCon 2017
Lightning talk on Julia software.

WORKSHOPS

Biomedical Data Science Workshop & Careers Panel July 2022
Tutorials in data science and reproducibility using Julia, R, and Python.

BioSimulator.jl @ Lange Symposium Feb 2020
Hands-on workshop for an inaugural symposium on biomath and computational statistics.

POSTERS

BioSimulator - UCLA Graduate Research Spring Symposium 2019

BioSimulator - NHGRI Research Training and Career Development 2019

BioSimulator - UCLA Graduate Research Spring Symposium 2018

BioSimulator - NHGRI Research Training and Career Development 2018

BioSimulator - Society of Mathematical Biology 2017

LANGUAGES

English, Spanish

SOFTWARE

Julia, FORTRAN, LaTeX; familiarity with R, MATLAB, Java, Python, C++

REFERENCES

Available upon request.