Jose Toledo Luna

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Education

University of California, Los Angeles   2021-present
Ph.D in Statistics
Advisor: Dr. Hongquan Xu

California State University, Fullerton   2021
Master of Science, Statistics

California State University, Fullerton   2019
Bachelor of Arts, Mathematics: Probability and Statistics

Santa Ana Community College   2016
Associate in Science: Mathematics

Teaching Experience

University of California, Los Angeles

Teaching Assistant, Teaching Associate, Teaching Fellow   Summer 2022-present

   STATS 10: Introduction to Statistical Reasoning (Fall 2022, Winter 2023, Spring 2023)

   STATS 13: Introduction to Statistical Methods for Life and Health Sciences (Summer 2022, Fall 2023)

   STATS 20: Introduction to Statistical Programming with R (Summer 2024)

   STATS 21: Python and Other Technologies for Data Science (Spring 2023)

   STATS 100B: Introduction to Mathematical Statistics (Summer 2023)

   STATS 100C: Linear Models (Summer 2023)

   STATS 102A: Introduction to Computational Statistics with R (Winter 2025)

   STATS 140/141XP: Practice of Statistical Consulting (Winter 2024 – Fall 2025)

   STATS 419: Experimental Design (Winter 2026)

California State University, Fullerton

Lecturer   Fall 2019 – Spring 2021, Fall 2024-Current

   Math 115: College Algebra (Fall 2019)

   Math 120: Elementary Statistics (Spring 2020, Fall 2020, Fall 2024, Fall 2025)

   Math 338: Statistics Applied to Natural Sciences (Spring 2021, Fall 2024)

Publications

Luna, J., Jaynes, J., Xu, H., & Wong, W. K. (2022). Orthogonal array composite designs for drug combination experiments with applications for tuberculosis. *Statistics in Medicine*, *41*(17), 3380–3397.

Toledo Luna, J. (2024). *ggDoE: Modern graphs for design of experiments with 'ggplot2'* (Version 0.8). https://CRAN.R-project.org/package=ggDoE

Toledo Luna, J., & Xu, H. (2025). Parallel tempering for constructing broad classes of experimental designs. *In Preperation*.

Toledo Luna, J., Ying, D., Onyambu, S. O., & Xu, H. (2025). An adaptive efficient gloabl optimization algorithm for hyperparameter optimization. *In Preperation*.

Toledo Luna, J., & Xu, H. (2026). Design and analysis of position based experiments with applications to convolutional neural networks. *In Preperation*.

Awards/Fellowships

Eugene V. Cota-Robles Fellowship   2021-2025

A highly competitive doctoral fellowship at UCLA—in recognition of outstanding potential in research and academic leadership

Most Promising Statistician Award, University of California, Los Angeles   2022

Graduate Readiness and Access in Mathematics (GRAM) NSF Fellowship   August 2017 – May 2019
Advised by Dr. Jessica Jaynes

Talks and Presentations

<u>Invited Talk:</u> Dose Response Modeling for Toxicology Studies
Society for Advancement of Chicanos/Hispanics and Native Americans in Science, Phoenix, Arizona 2024

<u>Contributed Talk:</u> Enhancing Efficient Global Optimization Through a Kriging Based Space Reduction
International Conference of Design of Experiments, University of Memphis, May 08-11. 2023

<u>Poster:</u> Orthogonal Array Composite Designs for Drug Combination Experiments
Society for Advancement of Chicanos/Hispanics and Native Americans in Science, Austin, Texas 2018

<u>Contributed Talk:</u> On Comparisons of Bayesian and Frequentist Estimators
Research for Undergraduates Summer Institute of Statistics, Oregon State University, 2018

<u>Poster:</u> Drug Combinations for KB Oral Cancer
Section Mathematical Association of America, San Diego State University, 2017

Undergraduate Advising

RESEARCH FOR UNDERGRADUATES SUMMER INSTITUTE OF STATISTICS (RUSIS)

Indiana University, School of Public Health   Summer 2025

Lead instructor for a 4-week intensive course covering topics in probability and statistical theory
Supervised a research group of undergraduate students:
Project: Parallel tempering for constructing space-filling designs

This work was supported by NSF grant DMS - 2244093 to Dr. Javier Rojo trough the RUSIS@IU program

PROJECT-RAISE: GRADUATE RESEARCH MENTOR

Assist first-generation undergraduate students across various community colleges
with the following summer research projects

Golden West College   Summer 2019
Project: Accounting for Type II Error in the Judgment of Significance of Effects in a Two-Level Factorial Design

Los Angeles Community College   Summer 2020
Project: Using Bayesian Analysis to Predict the Final Outcome for the 2019 FIFA Women's World Cup

Orange Coast Community College   Summer 2021
Project: Development of an R package for creating modern graphs using ggplot2 for Design of Experiments

Professional Service

Assistant Editor of Journal of Statistical Software   January 2024-Current

Collaborate with Editors-in-Chiefs to manage journal operations, including pre-screening submissions, assigning manuscripts to editors, maintaining databases, and preparing manuscripts for publication

Journal reviewer: Journal of the Indian Society for Probability and Statistics

Mentor Judge, Graduate and Undergraduate Statistics Poster Presentations
Society for Advancement of Chicanos/Hispanics and Native Americans in Science, Phoenix, Arizona 2024

Professional Memberships: American Statistical Association (ASA)

Work Experience

Southern California Coastal Water Research Project   November 2020 - September 2021
Data Scientist

Developed multiple Shiny apps to enhance scientific research in storm water best management practices, while mentoring team members in R skills and resolving complex data visualization challenges. Led the reorganization of legacy code into modular formats, improving and revitalizing existing applications

Technical Experience

Programming Languages: R, Rcpp, Python

Typesetting: LaTeX, Quarto

Cluster Computing: Slurm Workload Manager

Other: Git/Github, Linux