

# Jorge Loría

PhD in Statistics

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 loraj.github.io/

## Academic Employment

### Aalto University

Postdoctoral Researcher, Advisor Dr. Samuel Kaski

June 2024–Present  
Espoo, Finland

## Education

### Purdue University

PhD Statistics, Advisor: Dr. Anindya Bhadra

2019 – 2024

West Lafayette, Indiana, USA

### Universidad de Costa Rica

BS Actuarial Science

2014 – 2017

San José, Costa Rica

### Universidad de Costa Rica

BS Pure Mathematics

2015 – 2019

San José, Costa Rica

## Research Interests

- Heavy tails
- High dimensional data
- Bayesian inference
- Gaussian processes
- Computational methods
- Causal inference

## Publications

### Preprints

- » Björkman, Z., **Loría, J.**, Wharrie, S., and Kaski, S. (2025), Incorporating Expert Knowledge into Bayesian Causal Discovery of Mixtures of Directed Acyclic Graphs (*submitted*) [[arxiv](#)][[github](#)]
- » Fernández-Loría, C. and **Loría, J.** (2024+), Inferring Effect Ordering Without Causal Effect Estimation (*submitted*) [[arxiv](#)]

### Publications

- » **Loría, J.** and Bhadra, A. (2025), Deep Kernel Posterior Learning under Infinite Variance Prior Weights. *The 13th International Conference on Learning Representations (ICLR 2025)*. [[link](#)] [[github](#)]
- » **Loría, J.** and Bhadra A. (2024). Posterior Inference on Shallow Infinitely Wide Bayesian Neural Networks under Weights with Unbounded Variance. *Proceedings of the Fortieth Conference on Uncertainty in Artificial Intelligence, PMLR 244* 2331-2349 [[link](#)] [[github](#)]
- » **Loría, J.** and Bhadra, A. (2024). SURE-tuned bridge regression. *Statistics and Computing* **34**, 30. [[doi](#) [link](#)] [[github](#)]
- » Víquez, J. J., Víquez, J., Campos, A., **Loría, J.**, Mendoza, L. A. (2018). Demographic Modeling via 3-dimensional Markov Chains *Revista de matemática Teoría y aplicaciones* available in <https://revistas.ucr.ac.cr/index.php/matematica/article/view/33608>

## Awards

### Somos Purdue Award

Class of 2024

recognition of commitment to excellence and for leading with *ganas* at Purdue University.

### Bravo Award

Spring 2024

one time staff award

### Ross-Lynn Research Scholar Grant

Spring 2024

provides funding for notable graduate students

### Fully funded assistance to workshop on Bayesian Statistics and Statistical Learning

December 2023

IMSI, Illinois, USA

### Department of Statistics Travel Award

Summer 2023

## Department of Statistics Teaching Academy Associate Nominee

Spring 2023

## Emily and Paul Kidwell graduate student excellence Award

Spring 2022

given to graduate students in the Department of Statistics in Purdue University interested in careers in academia.

## Bob and Marjorie McLean Scholarship

Summers 2020 and 2021

given to distinguished graduate students of the Department of Statistics in Purdue University.

## Bronze Medal

2015

awarded in Competencia Iberoamericana Interuniversitaria de Matemáticas

## Honorable Mention

2014

awarded in Competencia Iberoamericana Interuniversitaria de Matemáticas

## Talks and Posters Presented

### Predicción en redes neuronales Bayesianas infinitas con pesos de varianza infinita

May 22nd, 2024

Seminario Intersede

CIMAT, Guanajuato, México

### SURE-tuned Bridge Regression

August 7th, 2023

Contributed Paper in Joint Statistical Meeting

Toronto, Canada

### SURE-tuned Bridge Regression

July 10th, 2023

Contributed talk in XVI Latin American Congress of Probability and Mathematical Statistics

São Paulo, Brazil

### SURE-tuned Bridge Regression

May 26th, 2023

Poster in Statistics and Optimization in Data Science Workshop, in Purdue Business School

Indiana, USA

### SURE-tuned Bridge Regression

April 2023

Invited talk in a weekly colloquium at CIMPA Universidad de Costa Rica.

Online

### Learner Culture and Perceptions of Social Media Applications and Learning Management Systems for Language Learning

April 2023

Paper session American Educational Research Association (AERA)

Illinois, USA

### Examining Learner Culture, Country, Gender, and English Public Speaking and Peer Feedback Self-Efficacy

April 2023

Round table in AERA

Illinois, USA

### Learning the Ranking of Causal Effects with Confounded Data

October 2022

Flash talk in INFORMS

Indiana, USA

## Research Experience

### Purdue University

#### - Research Assistant to Dr Anindya Bhadra

Spring 2022 and Fall 2023

in the project Inference in Infinite Width Neural Networks with Infinite Variance

#### - Research Assistant to Dr Arman Sabbaghi

Fall 2020-Summer 2021

designing experiments and evaluating results for refinement of nanotellurene thickness

#### - Team leader in Statistics for the Community

2019-2021

investigated the effects of having a bicycle to enable access to charity locations for impoverished people, with the LifeCycle program (voluntary).

## Universidad de Costa Rica

### - Research Assistant to Dr Luis Barboza

2016

- » implementing an actuarial model for a projection model of Caja Costarricense del Seguro Social

### - Research Assistant to Dr Juan José Víquez

2015

- » implementing a multivariate Markov chains model for the projection of public universities in Costa Rica

## Service to the Profession

### MSc. Thesis advisor

- » Zachris Björkman (2024), Lotta Mäkinen (2025), and Axel Hedman (2025)

### Reviewer

- » Statistics in Medicine (2023), Neurips (2023), UAI (2024), ICLR (2024)

## Teaching Experience

### Aalto University

Fall 2022

Espoo, Finland

#### Instructor

- » Co-organized a seminar on causal inference, following Pearl's 'primer' book on causal inference.

### Purdue University

Fall 2022

Indiana, United States

- » Taught one section of the course *Introduction to Statistics*. An introductory course for undergraduate students of computer science, mathematics, actuarial science, and statistics majors. Responsibilities included three weekly lectures, preparation of the relevant material, grading, and collaboration with the other instructors in the evaluation and design of the assignments of the course.

### Purdue University

Fall 2021 – Summer 2022, Summer 2023

Indiana, United States

#### Instructor

- » Taught two sections of the course *Elementary Statistical Methods*. An undergraduate level course for non-stem majors. Responsibilities included two weekly lectures to each section, preparation of the material, grading, leading teaching assistants and collaboration with other instructors for the evaluation of the course assignments.

### Purdue University

Fall 2019 – Spring 2021

Indiana, United States

#### Teaching Assistant

- » Held laboratories for two sections, office hours, and grading for the course *Elementary Statistical Methods*.

### Universidad de Costa Rica

Fall of 2017 & 2018

San José, Costa Rica

#### Instructor

- » Taught undergraduate course on basic functionalities of Excel and R. Responsibilities included lesson planning, course scheduling, and preparation of homework, exams, and course projects.

## Industry Experience

### Banco Promérica

January 2019 – July 2019

San José Costa Rica

*Financial Risk Analyst, analyzed financial data to evaluate and forecast credit risk*

### Quanto Soluciones S.A.

January 2017 – July 2018

San José Costa Rica

*Actuarial Model Programmer, implemented credit risk models*

## Communication

Spanish Native

English Advanced

Portuguese Basic

## Leadership Roles

### - President of Statistics Graduate Student Organization

2021-2022

Indiana, USA

### - Vice-president of Costa Rican Students Association at Purdue (CRISaP)

2021-2024

Indiana, USA