

Pedro Izquierdo Lehmann

PhD Student
Applied Mathematics and Statistics
Johns Hopkins University

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EDUCATION

Ph.D. Applied Mathematics and Statistics

Johns Hopkins University, Baltimore, MD, United States.
Advisor: Mateo Díaz

2023–now

M.S. Electrical Engineering

Universidad Católica de Chile, Santiago, Chile.
Advisor: Carlos Sing-Long
Dissertation: Maximizing the Psychoacoustic Sweet Spot

2021

B.S. Mathematical and Computational Engineering

Universidad Católica de Chile, Santiago, Chile.
Minor in Computer-Based Music

2019

JOURNAL PUBLICATIONS

Active set identification and rapid convergence for degenerate primal-dual problems

(with M. Diaz, H. Lu, J. Yang.)
Manuscript in preparation.

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Towards Maximizing a Perceptual Sweet Spot for Spatial Audio with Loudspeakers

(with C. A. Sing Long, R. Cádiz.)
IEEE Transactions on Audio, Speech, and Language Processing.

2022

CONFERENCE PROCEEDINGS

Exact Classification of NMR Spectra from NMR Signals

(with C. A. Sing Long, M. Andía, A. Xavier.)
International Conference on Acoustics, Speech, and Signal Processing.

2024

Classifying Healthy v/s NAFLD Mice from Liver Fatty Acids' H-MRS at 9.4 Tesla

(with C. A. Sing Long, M. Andía, A. Xavier.)
Joint Annual Meeting ISMRM-ESMRMB.

2022

Towards Maximizing a Perceptual Sweet Spot in a Reverberating Room

(with C. A. Sing Long, R. Cádiz.)
AES 4th Conference on Audio for Virtual and Augmented Reality.

2022

WORK EXPERIENCE

Millennium Institute iHealth (Santiago, Chile)

Research Assistant. Hosts: M. Andía, C. Sing Long.

Jan 2022 – Sep 2023

Millennium Institute Data Fundamentals (Santiago, Chile)

Software Engineer Intern. Manager: Jazmine Maldonado.

Aug 2020 – Dec 2020

AWARDS AND HONORS

Harriet H. Cohen Engineering Fellowship

Whiting School of Engineering, Johns Hopkins University.

2023

	Maximum Distinction M.S. Thesis Award <i>School of Engineering, Universidad Católica de Chile.</i>	2021
	Valedictorian Award <i>Mathematical and Computational Engineering Institute, Universidad Católica de Chile.</i>	2019
	Honor Fellowship <i>School of Engineering, Universidad Católica de Chile.</i>	2014
PRESENTATIONS	Statistics and Data Science Workshop , Bogotá, Colombia. <i>Poster.</i>	Dec 2025
	Optimization Workshop: Theory, Algorithms, and Applications , Bogotá, Colombia. <i>Poster.</i>	Dec 2024
	SIAM Conference on Mathematics of Data Science , Atlanta, GA, United States. <i>Poster.</i>	Oct 2024
	International Conference on Acoustics, Speech, and Signal Processing , Seoul, South Korea. <i>Poster.</i>	Apr 2024
	Jr. MINDS Seminar , Johns Hopkins University. <i>Talk.</i>	Apr 2024
	Applied Mathematics and Statistics Student Seminar , Johns Hopkins University. <i>Talk.</i>	Nov 2023
	Sound Department Seminar , Universidad de Chile. <i>Talk.</i>	Aug 2022
	AES 4th International Conference on Audio for Virtual and Augmented Reality , Redmond, WA, United States. <i>Talk.</i>	Aug 2022
	Joint Annual Meeting ISMRM-ESMRMB , London, England. <i>Talk.</i>	Aug 2022
	M.S. Defense , Universidad Católica de Chile. <i>Talk.</i>	Jan 2022
TEACHING	AMS 747 Mathematics of Data Science , Johns Hopkins University. <i>Teaching Assistant.</i>	Fall 2025
	AMS 730 Statistical Theory I , Johns Hopkins University. <i>Teaching Assistant.</i>	Fall 2025
	Introduction to Statistics for AMS Masters , Johns Hopkins University. <i>Instructor.</i>	Summer 2025
	AMS 762 Nonlinear Optimization II , Johns Hopkins University. <i>Teaching Assistant.</i>	Spring 2025
	AMS 761 Nonlinear Optimization I , Johns Hopkins University. <i>Teaching Assistant.</i>	Fall 2024
	IMT 3150 Convex Optimization , Universidad Católica de Chile. <i>Teaching Assistant.</i>	Spring 2021
	IMT 2113 Fourier Analysis , Universidad Católica de Chile. <i>Teaching Assistant.</i>	Fall 2020
SERVICE	Jr MINDS Seminar Coordinator , Johns Hopkins University.	Fall 2024