

# Pedro Izquierdo Lehmann

PhD Student  
Applied Mathematics and Statistics  
Johns Hopkins University

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🌐 <https://pizqleh.github.io>  
/github/pizqleh

## 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

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