

NICOLÁS ZALDUENDO

PhD Student at IECL Université de Lorraine - Inria Grand Est, Nancy.

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HIGHER EDUCATION

- PhD in Applied Mathematics,** *Oct 2020 - Today*
Université de Lorraine, Nancy, France.
Supervisors: Coralie Fritsch and Denis Villemonais.
- Master M2 “Mathématiques de l’Aléatoire”,** *Sept 2019 - Sept 2020*
Université Paris-Saclay, Orsay, France.
- Master of Engineering Sciences in Applied Mathematics,** *March 2018 - January 2019*
Universidad de Chile, Santiago, Chile.
Supervisor: Daniel Remenik.
Graduated with highest honors. My manuscript in spanish is [here](#)
- Mathematical Engineering,** *March 2012 - Dec 2017*
Universidad de Chile, Santiago, Chile.
Graduated with highest honors.
- Bachelor of Engineering Sciences, Mention Mathematics,** *March 2012 - Dec 2015*
Universidad de Chile, Santiago, Chile.

PROFESSIONAL EXPERIENCE

- Master M2 Internship. IECL, Université de Lorraine.** *April - Sept 2020*
Description: Study of the existent bibliography on the bisexual Galton-Watson branching process.
Supervisors: Coralie Fritsch, Emma Horton and Denis Villemonais.
- Assisant. Academic Management Direction. Universidad de O’higgins.** *March - July 2019*
Description: In charge of assisting the academic management director in the coordination of all the courses in the university, through the web platform *UCampus.cl*.
- Center for Advance Research on Education. Universidad de Chile.** *Oct - Nov 2018*
Description: In charge of develop mathematical problems to an intervention to high school teachers in the context of the ARPA program.
- 3rd Professional Internship. Biomedical Sciences Institute.** *Sept - Oct 2017*
Description: Assist in the organization and visual representation of data used in a medical research on senil dementia.
- 2nd Professional Internship. Universidad de Chile** *July 2017*
Description: Help in the development of an interview for school teachers and school directors, in the context of a research in the Center for Advance Research on Education.
- 1st Professional Internship. Biomedical Sciences Institute.** *January 2016*
Description: Implementation of decision trees to determinate the best estimator for linear regression for data arising from heavy tailed distributions.
- Assistant to the Executive Teaching Director. Universidad de Chile** *July 2015 - April 2017*
Description: In charge of coordinate the supervision, correction and reclamation of the tests and exams on all the mathematical courses of the first two years in the Faculty of Physical and Mathematical Sciences.

ACADEMIC EXPERIENCE

École des Mines de Nancy: as *Chargé de TD (20 hrs)* in the courses:

-Probabilités I.	<i>Sept - Dec 2022</i>
-Analyse Numérique.	<i>Sept - Dec 2022</i>
-Probabilités I.	<i>Sept - Dec 2021</i>
-Analyse Numérique.	<i>Sept - Dec 2021</i>
-Probabilités II.	<i>Sept - Dec 2020</i>

Universidad de Chile: (this course was taught online)

<i>Lecturer (45 hrs),</i> Introduction to Algebra.	<i>March - June 2021</i>
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Universidad de O'higgins

<i>Lecturer (45h),</i> Mathematics for Public Administration.	<i>March - June 2019</i>
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Universidad Técnica Federico Santa María

<i>Lecturer (45 hrs),</i> Statistics.	<i>March - June 2019</i>
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Universidad de Chile: Summer School for High School students.

<i>Lecturer (40 hrs),</i> Basics of Linear Algebra.	<i>January 2019</i>
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Universidad Andrés Bello

<i>Lecturer (45 hrs),</i> Probabilities and Statistics.	<i>June - Dec 2018</i>
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Universidad Santo Tomás

<i>Assistant Professor (20 hrs),</i> Linear Algebra.	<i>March 2017 - June 2017</i>
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Universidad de Chile: as *Assistant Professor (30 hrs)* in the courses:

-Stochastic Calculus (<i>2 times</i>).	<i>March 2014 - June 2019</i>
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-Abstract Algebra (*1 time*).

-Markov Processes (*2 times*).

-Probabilities (*2 times*).

-Probabilities and Statistics (*3 times*).

-Linear Algebra (*9 times*).

-Advanced Calculus and Applications (*1 time*).

-Introduction to Algebra (*2 times*).

-Multivariable Calculus (*1 times*).

-Differential and Integrable Calculus (*2 times*).

-Introduction to Calculus (*1 time*).

DISTINCTIONS

PhD contract. INRIA Grand Est. Nancy, France.

Oct 2020 - Oct 2023

Master Scholarship. *Sophie Germain Excellence Student Scholarship.*

Sept 2019 - Aug 2020

Fondation Mahtématique Jacques Hadamard, Paris, France.

Graduated with the highest honors

January 2019

Master of Engineering Sciences in Applied Mathematics.

Graduated with the highest honors

January 2019

Mathematical Engineering.

Outstanding Student Award

December 2017

Faculty of Physical and Mathematical Sciences. Santiago, Chile.

Outstanding Student

December 2012

Faculty of Physical and Mathematical Sciences. Santiago, Chile.

EXTRACURRICULAR ACTIVITIES

Elected member to the faculty council

Dec 2017 - Dec 2018

Member of the school student center directive board

March - Dec 2017

Charge: Teaching representative.

Member of the mathematical engineering student center

March 2016 - March 2017

Charge: Teaching representative.

PUBLICATIONS

Preprints:

- Restricted Maximum of Non-Intersecting Brownian Bridges. (2023).
With Yamit Yalanda. [Arxiv](#).
- The Multi-type Bisexual Galton-Watson Branching Process. (2022).
With Coralie Fritsch and Denis Villemonais [Arxiv](#) [Hal](#).

LANGUAGE SKILLS

English

Advanced

French

Advanced

Spanish

Native