# Rodrigo Andre Zelada Mancini

Mathematical Engineer, M. Sc. Eng. in Applied Mathematics.

👤 August 09, 1994

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## Social Network —

in linkedin.com/in/rodrigo-andre-zelada-mancini-b15553184/

⊙ github.com/RodrigoZelada

## Skills ———

⚖ Relationship building

⚖ Organized

⊹ Persistent

⊹ Collaborator

🎓 Compromised

🎓 Work to achieve goals.

# Education

| 2013 – 2019 | **Mathematical Engineer** | Universidad de Chile |
|---|---|---|
| 2019 – 2020 | **Master in Engineering Sciences, minor Applied Mathematics** | Universidad de Chile |
| 2016 – 2018 | **Additional Specialization: Minor in Astronomy** | Universidad de Chile |

# Working Experience

**June 2020 - March 2021**  **Supply Chain Analyst**  Fork Chile

- Implementation of Machine Learning algorithms and Statistical tools to predict sales (Forecasting).
- Develop a model that integrates production, inventory and distribution of perishable products in a supply chain environment, with products that have differents shelf-lives.

**2019–2020**  **Research and Thesis**  Universidad de Chile
Hydrodynamic model of the Red Tide in Quellón Bay.
Advisor: Carlos Conca, Co-advisor: Jorge San Martín.

- Implementation of the Navier-Stokes equations and the Advection-Difussion equation in MATLAB, using the Finite Volume Method.
- Compare the solutions obtained in MATLAB with the open source CFD software OpenFOAM, in which we modified a solver.
- Graduated with highest honors.

**January 2017**  **Professional Internship I**  DAS (Department of Astronomy)
Maximumum Entropy Method for radio astronomical synthesis image. Supervision: PhD. Simón Cassasus, PhD. Pablo Román and PhD. Axel Osses.

**January 2018**  **Professional Internship II**  DIM ( Department of Mathematical Engineering)
A computational algorithm for the Legendre-Fenchel conjugate. Supervision: PhD. Abderrahim Hantoute.

**January 2019**  **Professional Internship III**  CMM (Center for Mathematical Modeling)
Validation of numerical algorithms for the Stokes and the Navier-Stokes equations. Supervision: PhD. Raúl Gormaz.

# Awards

| 2018 | Highlighted Student | Facultad de Ciencias Físicas y Matemáticas |
|---|---|---|

# Languages

🇪🇸 Spanish (Native) ● ● ● ● ●
🇬🇧 English (B2) ● ● ● ○ ○
🇫🇷 French (A2) ● ● ○ ○ ○

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## About me ──────

I am enthusiastic about applied mathematics and programming. More than a specific area, I'm interested in real life problems; modelling problems and to solve them with mathematics as a tool. I am curious as a scientist, I am not afraid about new knowledge. I believe that the world can be understand from the perspective of physics, and how this is described with partial differential equations. I am a versatile researcher and a fast learner.

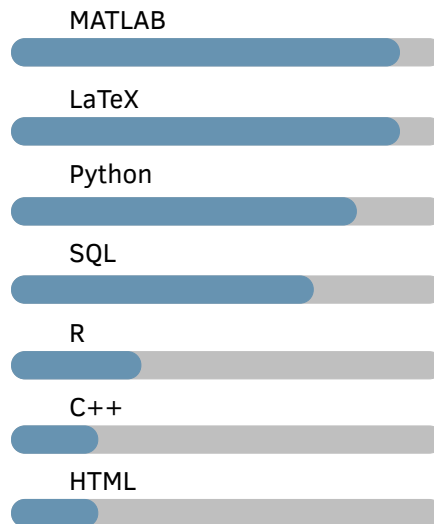## Interests ──────

Mathematical Mechanics
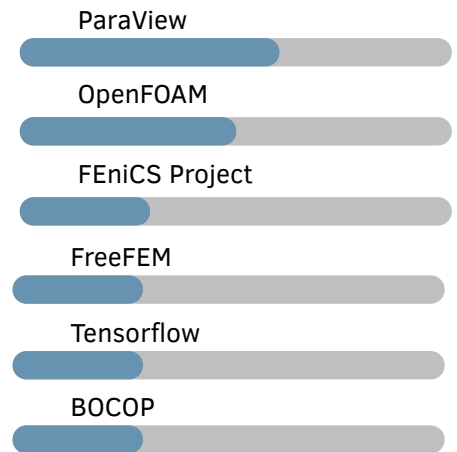
Fluid Dynamics

Inverse Problems

Shape Optimization

Deep Learning

## Programming

MATLAB

LaTeX

Python

SQL

R

C++

HTML

## Maths. and C.S. Softwares

ParaView

OpenFOAM

FEniCS Project

FreeFEM

Tensorflow

BOCOP

## Teaching

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|---|---|
| Fall 2016 | Test grader MA2002 - Advanced Calculus |
| Spring 2016 | Test grader MA2002 - Advanced Calculus |
| Fall 2019 | Teacher's assistant MA5602 - Evolution Problems |
| Spring 2019 | Teacher's assistant MA1101 - Introduction to Algebra |
| Spring 2019 | Tutor SIPEE's Program MA1102 - Introduction to Algebra |
| Spring 2019 | Test grader MA1002 - Single Variable Calculus |
| Spring 2019 | Tutor SIPEEE's Program MA1002 - Single Variable Calculus |
| Spring 2019 | Test grader MA1102 - Linear Algebra |

## Seminars

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|---|---|
| November 27 - 29, 2020 | **Workshop CeBIB (Centre for Biotechnology and Bioengineering)**<br><br>Poster presentation: Hydrodynamical model of Red Tide in Quellón Bay |

## Extracurricular activities

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|---|---|---|
| 2015-2018 | **cde! member (Student Development Center)**<br>I participated in a social group at University called Cde!, which consisted of doing volunteer work during the holidays and visiting regularly Sename's children. | FCFM |
| Autumn 2015 | **Volunteer Work in San Clemente**<br>We painted a rural school and put grass. | cde! |
| Winter 2017 | **Volunteer Work in Colina**<br>Sustainable garden construction at Font School. | cde! |
| 2017-2018 | Secretary | cde! |
| 2017 | Sustainability Representative | DIM |