Jorge Novoa Contreras

University of Chile • Santiago, Chile • jnovoa@dim.uchile.cl

Education

University of Chile — Santiago, Chile
Bachelor of Science in Engineering, major in Mathematics — 2020 – 2024
Mathematical Civil Engineering — 2020 – 2025
Master of Engineering Sciences, major in Applied Mathematics — 2025 – 2026

Publications

1. J. Novoa, R. Manásevich, *Global continuum of solutions for systems of ODEs with periodic boundary conditions and generalized variable-exponent operators*, *Communications on Pure and Applied Analysis*. DOI

Research Experience

University of Chile — Santiago, Chile
Research Intern — Dec. 2024 – Feb. 2025

- During my Professional Internship III (theoretical research), I studied nonlinear differential equations, focusing on the existence of periodic solutions for systems with ϕ-Laplacian type operators and variable-exponent operators, under the supervision of Professor Raúl Manásevich.

Teaching Experience

University of Chile — Santiago, Chile
Assistant Instructor — 2022 – 2025

- Problem-solving sessions and tutoring for: *Multivariable Calculus*, *Ordinary Differential Equations*, *Laboratory: Enhancing your Mathematical Skills*, and *Nonlinear Analysis*.

Teaching Assistant — 2022 – 2025

- Grading quizzes, tests, and exams for: *Multivariable Calculus*, *Differential and Integral Calculus*, *Complex Variables and Special Functions*, *Linear Algebra*, and *Advanced Calculus and Applications*.

Other Experience

CMM — Santiago, Chile
Selection Reviewer at IMMC 2024 — Nov. 2023 – Dec. 2023

- Participated in the selection process of the teams representing Chile for the International Mathematical Modeling Challenge (IMMC), organized by the Center for Mathematical Modeling (CMM).

RialStat — Santiago, Chile
Intern

- **Jan–Feb 2023 (Professional Internship I):** Reviewed and validated economic/financial datasets and collaborated in the development of statistical and macroeconomic models, including short-term predictive models for key indicators of the Chilean economy.
- **Dec 2023–Feb 2024 (Professional Internship II):** Conducted research and applied statistical and AI/ML methods to support investment portfolio construction, focusing on predicting and selecting assets for the portfolio.

Skills

Programming: Python (Intermediate), R (Intermediate); **Languages:** Spanish (Native), English (B2)