Bastián Núñez-Boettiger

Valparaíso, Chile

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RESEARCH INTERESTS

Dynamical systems and ergodic theory, in particular smooth dynamics, non-invertible hyperbolic systems, cocycles over dynamical systems and continuity and flexibility of Lyapunov exponents.

EDUCATION

MSc in Mathematics Valparaíso, Chile
Pontificia Universidad Católica de Valparaíso (IMA-PUCV). Advisor: Prof. Radu Saghin Mar 2022 – expected Dec 2023

- Thesis: *Continuity of Lyapunov exponents in torus endomorphisms*. (WIP)
- Electives: Hyperbolic Dynamics, Ergodic Theory, Numerical Linear Algebra.

BSc in Mathematics Santiago, Chile
Universidad de Chile (summa cum laude, class rank #1) Mar 2018 – Jul 2021

- Capstone projects: guided reading of Barreira-Pesin's *Introduction to Smooth Ergodic Theory* (supervised by Prof. Gonzalo Robledo Veloso) and of Bowen's *On Axiom A Diffeomorphisms* (supervised by Prof. Nelda Tamblay).
- Relevant coursework: One-Dimensional Dynamics, seminar on Three-Dimensional Flows and Geometric Lorenz Attractors.

Bachiller en Ciencias Naturales y Exactas Santiago, Chile
Universidad de Chile Mar 2016 – Dec 2017

PRIZES AND SCHOLARSHIPS

Jorge Billeke Prize 2022 SOMACHI, Chile
Academic excellence award conferred each year to a prominent undergraduate by the Mathematical Society of Chile. Dec 9th, 2022

National Master's Scholarship 2022 ANID, Chile
Scholarship granted by the Chilean govt. for Master's studies. Placed 7 out of 269 selected and 1895 applicants. 2022 – 2023

SELECTED TALKS

XCI Encuentro Anual SOMACHI. *Continuidad de exponentes de Lyapunov en endomorfismos de superficies.* Dec 20th, 2023

Brin MRC Summer School: Partial Hyperbolicity. *Inverse limits as solenoidal manifolds.* Jun 1st, 2023

TEACHING AND SERVICE

T.A., IMA-PUCV 2022 – 2023
Tutoring for late UG and early graduate courses: Differential Geometry, General Topology, Complex Analysis.

Course notes, Dept. Math. UChile 2022
Hired to transcribe and edit LaTeX notes for first-year Calculus which were then adopted as the department's course notes.

T.A., Dept. Math. UChile 2020 – 2021
Tutoring and grading for second and third year UG courses: Multivariable Calculus, Differential Equations, Real Analysis.

Co-organizer, UChile Mathematics Student Seminar 2019 – 2021

ACADEMIC ACTIVITIES

XCI Encuentro Anual SOMACHI Chile
 Dec 18th - 21st, 2023

1st LESET Workshop: Lyapunov Exponents and Smooth Ergodic Theory Brazil
 Nov 27th - Dec 1st, 2023

Summer School: Partial Hyperbolicity Brin MRC, Maryland
 May 30th - Jun 9th, 2023

AIM Research Community "Big Ideas in Dynamics" AIM, California (online)
Took part in reading group about pathological center foliations (cf. Shub-Wilkinson, 1999). Feb 2023 – May 2023

IMPA Summer Program 2021 IMPA, Brazil (online)
Passed with "A" grade in two MSc level courses: Complex Dynamics, Markov Chains. Jan 2021 – Feb 2021

OTHER SKILLS AND INTERESTS

- Languages: Spanish (native), English (fluent – EF SET C2 Proficient), Portuguese (intermediate).
- Computer: LaTeX, graphics and multimedia editing software, GNU/Linux, Python and SageMath.
- Free time: Music production, hobby electronics and DIY.