

# Dr. ITALO CIPRIANO

## PERSONAL DATA

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NAME: Italo Cipriano  
PLACE AND DATE OF BIRTH: Santiago, Chile | 5 May 1986  
ADDRESS: Hernando de Magallanes 958, dpto 503, Las Condes, Santiago, Chile  
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EMAIL: [icipriano@gmail.com](mailto:icipriano@gmail.com)  
FAMILY STATUS: Single  
NATIONALITY: Chile / Italy

## WORK EXPERIENCE

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| 2022-2024 | Modeling and pricing in the Chilean Bond Market, LVAindices.   |
| 2020-2022 | Postdoc. Optimization for project management in underground mine planning, Postdoctoral fellowship, Universidad Adolfo Ibáñez - Chile. Project code: FONDEF ID1910164. |
| 2016-2022 | Lecturer. Ordinary Differential equations, Calculus, Linear Algebra, Differentiation and Integration, Introduction to Algebra.   |
| 2018-2020 | Postdoc. Dynamical Systems and Ergodic Theory, Postdoctoral fellowship, Pontificia Universidad Católica de Chile. Project code: CONICYT PIA ACT172001.                 |
| 2017-2018 | Researcher. Tailing Optimal Control and Supervision Through New Technologies. Project code: FONDEF IT16M10012.   |
| 2017-2018 | Researcher. Developing of new technologies for early-warning systems of stability of tailing dams. Project code: FONDECYT 1161039.                                     |

## PROGRAMMING SKILLS

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Advanced | Python, Pandas, R, Matlab, Sage

User | Java, Git, Slurm, Slack, Latex, DualSPHysics, DBeaver, AWS, CPLEX

## LANGUAGES

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English (proficient user), Italian (bilingual), Spanish (bilingual), German (A1)

## EDUCATION

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| 2015 | PH.D. IN MATHEMATICS<br>(Thermodynamic Formalism)<br>Warwick University, Coventry, UK                           |
| 2011 | BACHELOR OF SCIENCES IN ENGINEERING MATHEMATICS<br>(Equivalent to M.Sc)<br>University of Chile, Santiago, Chile |

## PUBLICATIONS

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1. I. Cipriano, "Entry time statistics to different shrinking sets," *Stochastics and Dynamics. Stoch. Dyn.*, vol. 17, no. 3, pp. 314–323, 2017.
2. I. Cipriano and M. Pollicott, "Stationary measures associated to analytic one dimensional iterated function schemes," *Mathematische Nachrichten*, vol. 291, no. 7, pp. 1049–1054, 2018.
3. I. Cipriano and G. Iommi, "Time change for flows and thermodynamic formalism", *Nonlinearity*, 2019.
4. I. Cipriano and N. Jurga, "Approximating integrals with respect to stationary probability measures of iterated function systems", *Ergodic Theory and Dynamical Systems*, 2020.

5. A. Hill, A. Brickey, I. Cipriano, M. Goycoolea and A. Newman, "Optimization Strategies for Resource-Constrained Project Scheduling Problems in Underground Mining", *INFORMS Journal on Computing*, 2022.

## SELECTED TALKS

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1. The University of Warwick, Thermodynamic Formalism: Ergodic Theory and Geometry, A workshop celebrating the 60th birthday of Mark Pollicott, 10-14 Jul 2019. "Approximating integrals with respect to stationary probability measures and applications."
2. CIRM - Luminy, Thermodynamic Formalism: Ergodic Theory and Validated Numerics, 8-12 Jul 2019. "Time change for flows."
3. University of Oxford, Young Research Meeting, 17 Aug 2015. "Large deviations."

## TEACHING

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- Universidad Técnica Federico Santa María, Santiago, Chile
  1. Dynamical Systems (33h, 2 lectures pw, 11 students, Spanish) Fall-2024
  2. Ordinary differential equations (45h, 2 lectures pw, 20 students, Spanish) Spring-2019
  3. Dynamical Systems (33h, 2 lectures pw, 12 students, Spanish) Fall-2019
  4. Introduction to Calculus (45h, 2 lectures pw, 24 students, Spanish) Spring-2017
  5. Differentiation and Integration (45h, 2 lectures pw, 26 students, Spanish) Spring-2017
  6. Introduction to Calculus (45h, 2 lectures pw, 31 students, Spanish) Fall-2017
  7. Differentiation and Integration (45h, 2 lectures pw, 30 students, Spanish) Fall-2017
- FCFM, Universidad de Chile, Santiago, Chile
  1. Ordinary Differential Equations (45h, 2 lectures pw, 89 students, Spanish) Fall-2017
- Universidad Adolfo Ibáñez, Santiago, Chile
  1. Risk Management\*\* (teaching assistant, postgraduate course, 8 students, Spanish) Spring-2022
  2. Foundations (45h, 3 lectures pw, 40 students, Spanish) Fall-2017
  3. Linear Algebra (45h, 3 lectures pw, 19 students, Spanish) Spring-2016

## CERTIFICATIONS

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- Introduction to Financial Engineering and Risk Management Graphic. Columbia University, 2023.
- Practical Time Series Analysis. The State University of New York, 2019.
- The R Programming Environment. Johns Hopkins University, 2019.
- Algorithmic Toolbox. University of California, San Diego & Higher School of Economics, 2016.
- Machine Learning. Stanford University, 2016.

## AWARDS, FELLOWSHIPS, SCHOLARSHIPS

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- ENRE Best Publication Award in Natural Resources, 2023.

- Postdoctoral fellowship, Research supported by National Commission for Scientific and Technological Research - Chile, School of Business, Universidad Adolfo Ibáñez - Chile, 2019.
- Postdoctoral fellowship, Research supported by National Commission for Scientific and Technological Research - Chile, Institute of Mathematics, Pontificia Universidad Católica de Chile, 2017.
- Graduate Scholarship, CONICYT - Chile, Studies supported by National Commission for Scientific and Technological Research - Chile, 2010.
- Outstanding student, Universidad de Chile, 2005.

## RESPONSIBILITIES, ORGANISER, CONSULTING

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- 2020- , Reviewer American Mathematical Society, AMS.
- 2018-2020, Organizer [Santiago Dynamical Systems Seminar](#).
- 19-21 Dec 2018, Co-organizer, Encuentro LXXXVII Chilean Mathematical Society, SOMACHI.
- 2016, Private consultant, [R&V Ingenieros](#), Engineering. company with projects in soil mechanics, urbanisation and hydraulic engineering.
- 2016, Private consultant, Information security.

## OTHERS

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- Best swimmer University of Chile, 2006.
- Best swimmer Región Metropolitana, Chile, 1999.
- Chilean national swimming team, 1998.
- Chilean national record swimming, 1998.