

Clarence Lewis Protin

Of dual US-Belgian nationality, I was born in Madrid on the 12th of August of 1977.

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Education

- PhD in Mathematics from the Instituto Superior Técnico (University of Lisbon), 2008.
Thesis : Quantales of Open Groupoids. Area : Category Theory and Noncommutative Geometry.
- PhD qualifying exams in Geometry and Topology and Mathematical Analysis at the IST, 2005.
- Graduate level courses at the IST in category theory, modal logic, non-conventional computation and Feynman integrals, 2004-2005.
- Four-year PhD Scholarship from the Science and Technology Foundation (FCT) 2004-2008 (SFRH/BD/17823/2004).
- Four-year degree in Mathematics, concluded at the University of Lisbon in 2003 with an average of 18/20 on the final year. Courses in mathematical logic, algebraic topology, algebraic geometry and universal algebra and lattice theory.

Peer-Reviewed Publications

1. Quantales of Open Groupoids. *J. Noncommut. Geom.* 6 (2012), 199-247.
doi: 10.4171/JNCG/90 <http://arxiv.org/abs/0811.4539> (with Pedro Resende).
2. Type-inhabitation of Atomic Polymorphism is Undecidable, *Oxford Journal of Logic and Computation*, Volume 31, Issue 2, March 2021.
<https://academic.oup.com/logcom/advance-article-abstract/doi/10.1093/logcom/exaa090/6082839>
3. Typability and Type Inference in Atomic Polymorphism (with G. Ferreira), *Logical Methods in Computer Science*, Vol 18, Issue 3, 2022.
<https://lmcs.episciences.org/9915>.
4. A Logic for Aristotle's Modal Syllogistic, *History and Philosophy of Logic*, 2022.
<https://www.tandfonline.com/doi/full/10.1080/01445340.2022.2107382>
<https://doi.org/10.1080/01445340.2022.2107382>

Some Preprints

1. Embeddings between classical, intuitionistic and linear logic (with Gilda Ferreira).
2. Modern incarnations of the Aristotelic Topos.
<https://arxiv.org/abs/2105.05889>
3. Ancient natural deduction.
<https://arxiv.org/abs/2209.03388>
4. Logic and semiotics in Aristotle's Topics.
<https://arxiv.org/abs/2303.03269>
5. Modern light on ancient logic.
<https://arxiv.org/abs/2211.06447>
6. A general theory of systems.
https://www.researchgate.net/publication/365767659_A_General_Theory_of_Systems
7. Note on the systems theory of Takahara and Mesarovic.
https://www.researchgate.net/publication/367161297_Note_on_the_Systems_Theory_of_Takahara_and_Mesarovic
8. Information and reality.
https://www.researchgate.net/publication/365353814_Information_and_Reality
9. Introduction to Pylog.
https://www.researchgate.net/publication/364302266_Introduction_to_PyLog
10. Kelley Morse Theorems 4–100.
https://www.researchgate.net/publication/364302259_Kelley-MorseTh4-100

Communications

- A simple proof assistant for first-order logic and set theory, Mathematical Logic Webinar, 16th of December of 2022. <https://ciencias.ulisboa.pt/pt/evento/16-12-2022/a-simple-proof-assistant-for-first-order-logic-and-set-theory>
- A Constructive Proof of the Univalence Axiom, Mathematical Logic Webinar, 18th and 25th of May of 2022.
[a-constructive-proof-of-the-univalence-axiom](https://www.researchgate.net/publication/365353814_Information_and_Reality)
- Bealer's Intensional Logic, ALOPHIS seminar, 18th of May 2021. <https://people.unica.it/alophis/alophis-weekly-seminars/>
- Bealer's Intensional Logic, Logic Seminar of the University of Lisbon (2020) (2 talks)
<https://ciencias.ulisboa.pt/pt/evento/12-10-2020/bealers-intensional-logic-part-i>

- On the undecidibility of type inhabitation for atomic polymorphism, Logic Seminar of the University of Lisbon (2018)
<https://ciencias.ulisboa.pt/sites/default/files/cmafcio-08out18.pdf>
- A Topos Theoretic Model for Intuitionistic Analysis, Grupo de Trabalho em Questões Lógicas of the Universidade de Lisboa (2010), Series of 5 lectures.
http://cmf.fc.ul.pt/arquivo/docs/seminarios/gtql/2010/2010_Maio_20.pdf
- Quantaes beyond étale groupoids , Category Theory Conference 2007, Carvoeiro, Portugal.
<http://www.mat.uc.pt/~categ/ct2007/abstracts/Protin.pdf>
- Minimal realization for quantum automata, Quantum Computation and Information Seminar at the Instituto Superior Técnico (2004).
<https://math.tecnico.ulisboa.pt/seminars/qci/index?action=show&id=943?action=show&id=943&lang=en>
- From a probabilistic SC institution to parainstitutions, Logic and Computation Seminar at the Instituto Superior Técnico (2004).
<https://math.tecnico.ulisboa.pt/seminars/clc/index?action=show&id=989>

Research centers and projects

- FCT project QUANTLOG (for 2004)
- PhD Student Member of the Centro de Lógica e Computação at the Instituto Superior Técnico (2004).
- Member (2010 -) of the Grupo de Lógica Matemática of the CMAF of the University of Lisbon <https://cmafcio.campus.ciencias.ulisboa.pt/node/142>
- Collaborator at the Center for the Philosophy of Science of the University of Lisbon (CFCUL) (2020 -) <https://cful.ciencias.ulisboa.pt/equipa/clarence-protin/>

Work as Editor

Subreviewer for an article that appeared in RAMICS 2020 <http://ramics18.gforge.inria.fr>

Some Conferences attended

Days in Logic 2022

<https://daysinlogic2022.ualg.pt>

LanCog Workshop on Substructural Logics, September 26-27, 2019

<https://cful.letras.ulisboa.pt/events/workshop-on-substructural-logics/>

International Category Theory Conference 2007
<http://www.mat.uc.pt/~categ/ct2007/>

CombLog '04
<http://www.cs.math.ist.utl.pt/comblog04/>

Employment and Experience

- Present (March 2023) : Tutor for Operations Research and Mathematics Applied to Management at the Universidade Aberta.
- Present (March 2023) : Private tutor in mechanics and mathematical analysis.
- September 2022 - February 2023: Tutor for Mathematical Analysis at the Universidade Aberta.
- September 2022 - February 2023: Private tutor in differential equations and Octave/Matlab.
- 2012 - 2022 : Private tutor in advanced high-school mathematics, numerical analysis, probabilities and statistics, calculus and econometrics.
- 2009 - 2011 : Assistant Professor of Mathematics at the Universidade Lusófona de Humanidades e Tecnologias.
- 2009 - 2011 : Lecturer of linear algebra and mathematical analysis (in one and several variables) at the Universidade Lusófona.

IT skills

Some machine code and x86 assembly, the Linux command line, C, OCaml, Python, Java, Coq and Web programming languages (HTML/CSS/PHP/Javascript).

Some of my code on GitHub : <https://github.com/owl77>

Languages

My native tongue is English. I have lived most of my life in Portugal (Lisbon) and can speak, read and write Portuguese. I can read and understand French, German, Spanish and some Dutch.

Some other activities

- Classical piano. I studied music for eleven years (1984-1995) at the Escola de Música e Belas Artes Luisa Todi in Setúbal having reached level 6 on the piano.