Christian Táfula

Curriculum Vitae (10/2026)

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Academic Appointments

2026–present **Postdoctoral Researcher**, *University of São Paulo*, São Paulo, Brazil
Funded by FAPESP. Supervisor: Prof. Sinai Robins.

Education

2020–2025 **Ph.D. in Mathematics**, *Université de Montréal*, Montréal, Canada
Supervisor: Prof. Andrew Granville

2018–2020 **M.Sc. in Mathematics**, *Kyoto University*, Kyoto, Japan
Supervisor: Prof. Shinichi Mochizuki

2013–2016 **B.Sc. in Mathematics**, *University of São Paulo*, São Paulo, Brazil

Research Interests

Analytic number theory; Additive combinatorics.

Honors and Scholarships

2024–2025 **Doctoral Finishing Grant (ESP)**, *Université de Montréal*
Competitive scholarship awarded by the Études supérieures et postdoctorales (ESP) to PhD candidates in their final year of thesis writing.

2017–2020 **MEXT Scholarship**, *Japanese Ministry of Education*
Full merit-based scholarship for international graduate students (Japanese Embassy recommendation track).

2013–2015 **PICME Research Scholarship**, *CNPq*, Brazil
Undergraduate research fellowship awarded by the National Council for Scientific and Technological Development (CNPq) to prior Math Olympiad medalists.

Publications and Preprints

[17] M. Aymone, S. Figueredo, S. Iyer, and C. Táfula. Quantitative linear independence for square roots. Submitted for publication. Available at `arXiv:2609.14161`, 2026+.

[16] C. Táfula. Bounded asymptotic bases for linear forms. Submitted for publication. Available at `arXiv:2609.11848`, 2026+.

[15] C. Sabuncu and C. Táfula. The multiplication table problem in large dimensions. Submitted for publication. Available at `arXiv:2608.16163`, 2026+.

[14] C. Táfula. On Vu's restricted box estimate in Waring's problem. Submitted for publication. Available at `arXiv:2605.15067`, 2026+.

[13] C. Táfula. Thin subbases of Piatetski-Shapiro sequences. Submitted for publication. Available at `arXiv:2605.04411`, 2026+.

[12] S.-K. Leung and C. Táfula. Multiplicative recurrence of Möbius transformations. Submitted for publication. Available at `arXiv:2409.12936`, 2026+.

[11] C. Táfula. Waring and Waring–Goldbach subbases with prescribed representation function. Submitted for publication. Available at `arXiv:2501.08371`, 2026+.

[10] C. Táfula. Representation functions with prescribed rates of growth. *Random Structures Algorithms*, 69(1):Paper No. e70088, 2026.

[9] C. Táfula. Infinite Sidon-type sets for zero-sum linear forms. *Monatsh. Math.*, 211(2):315–327, 2026.

[8] C. Táfula. A note on the Cramér–Granville model. *Arch. Math. (Basel)*, 126(3):275–283, 2026.

[7] C. Táfula. Zeros near $s = 1$ and the constant term of L'/L for L-functions in the Selberg class. *Indag. Math. (N.S.)*, 36(4):979–987, 2025.

[6] C. Táfula. On the size and structure of t-representable sumsets. *Discrete Math.*, 348(1):Paper No. 114295, 2025.

[5] C. Táfula. Classification of the conjugacy classes of $\widetilde{\mathrm{SL}}(2, R)$. *Expo. Math.*, 42(6):Paper No. 125626, 2024.

[4] C. Táfula. Knights are 24/13 times faster than the king. *Fibonacci Quart.*, 62(3):208–214, 2024.

[3] C. Táfula. On Landau–Siegel zeros and heights of singular moduli. *Acta Arith.*, 201(1):1–28, 2021.

[2] C. Táfula. An elementary heuristic for Hardy–Littlewood extended Goldbach's conjecture. *São Paulo J. Math. Sci.*, 14(1):391–405, 2020.

[1] C. Táfula. An extension of the Erdős–Tetali theorem. *Random Structures Algorithms*, 55(1):173–214, 2019.

Books

Translations

[1] D. B. Zagier, *Funções zeta e corpos quadráticos*, Textuniversitários, vol. 29, LF Editorial, São Paulo, 2025, Portuguese translation by C. Táfula.

Outreach and Popularization

[1] C. Táfula. Cavalier contre le roi sur l'échiquier infini : Qui est le plus rapide ? *Accromath*, 21(1):18–23, 2026. In French.

Selected Talks

10/2026 Thin Waring subbases and beyond. *Analytic Number Theory and Related Topics*, Kyoto, Japan.

08/2026 Multiplicative recurrence of Möbius transformations. *Seminário de Teoria dos Números da UFMG*, Belo Horizonte, Brazil.

05/2025 Waring and Waring–Goldbach subbases with prescribed representation function. *Combinatorial and Additive Number Theory (CANT 2025)*, New York, USA.

04/2024 Representation functions with prescribed rates of growth. *Canadian Number Theory Association (CNTA XVI)*, Toronto, Canada.

05/2023 On the structure of t-representable sumsets. *Combinatorial and Additive Number Theory (CANT 2023)*, New York, USA.

09/2021 From ABC to L: On singular moduli and Siegel zeros. *Inter-universal Teichmüller Theory (IUT) Summit*, Kyoto, Japan.

Teaching Experience

Winter 2023 **Teaching Assistant**, *Université de Montréal*
MAT 1000 – Analyse 1. Led tutorial sessions; held office hours; graded examinations.

Autumn 2021 **Teaching Assistant**, *Université de Montréal*
MAT 3632 – Théorie des nombres. Assisted with coursework and problem sessions; graded assignments and examinations.

Skills

Languages Portuguese (Native), English (Fluent), French (Intermediate), Japanese (Basic)

Programming C/C++, Python, LaTeX

Mathematical Olympiads

2006–2012 **Brazilian Mathematical Olympiad for Public Schools (OBMEP)**
Received 7 consecutive awards: 4 Silver Medals, 2 Bronze Medals, and 1 Honorable Mention.

2009 **São Paulo Mathematical Olympiad (OPM)**
Silver Medal.