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Born: October 19, 1994

Education

- 2020–2023 PhD in Mathematics at Tohoku University
Thesis: Exploring the difference hierarchies on μ -calculus and arithmetic — from the point of view of Gale–Stewart games
Advisor: Keita Yokoyama
- 2018–2020 Master in Mathematics at Tohoku University
Thesis: On the weak hierarchy of μ -calculus
Advisor: Kazuyuki Tanaka
- 2014–2017 Undergraduate in Mathematics at Universidade Federal de Goiás, Brazil
- 2012–2013 Undergraduate in Computer Science (incomplete) at Universidade Federal de Goiás, Brazil

Complementary Education

- 2019 IMS Graduate Summer School in Logic at NUS, Singapore
- 2016 IMS Graduate Summer School in Logic at NUS, Singapore

Teaching

- 2021 Teaching Assistant — 数学基礎論特論 (Mathematical Logic — Graduate)
- 2021 Teaching Assistant — 計算機数学 A (Computability A)
- 2022 Teaching Assistant — 計算機数学 B (Computability B)

Publications

L. Pacheco, W. Li, K. Tanaka, *On one-variable fragments of modal μ -calculus*, Proceedings of CTFM 2019, World Scientific Publications (2022), 17–45.

L. Pacheco, K. Tanaka, *On the degrees of ignorance: via epistemic logic and mu-calculus*, Proceedings of SOCREAL 2022: 6th International Workshop on Philosophy and Logic of Social Reality (2022), 74–78.

L. Pacheco, K. Tanaka, *The alternation hierarchy of the mu-calculus over weakly transitive frames*, Proceedings of WoLLIC 2022 – 28th Workshop on Logic, Language, Information and Computation, Lecture Notes in Computer Science, vol 12468, 207–220.

L. Pacheco, *Recent Results on Reflection Principles in Second-Order Arithmetic*, RIMS Kôkyûroku No.2228, 73–77.

L. Pacheco, K. Yokoyama, *Determinacy and reflection principles in second-order arithmetic*, preprint, [arXiv:2209.04082](https://arxiv.org/abs/2209.04082).

Talks

- 2022 *The μ -calculus collapses to modal logic over frames of IS5* at [Proof Theory Symposium 2022](#).
- 2022 *The alternation hierarchy of the μ -calculus over weakly transitive frames* at [28th Workshop on Logic, Language, Information and Computation](#).
- 2022 *Determinacy and reflection principles in second-order arithmetic* at [Workshop on Reverse Mathematics and its Philosophy](#), joint presentation with Keita Yokoyama.
- 2022 *Determinacy and reflection principles in second-order arithmetic* at [The second Japan-Russia workshop on effective descriptive set theory, computable analysis and automata](#).
- 2022 *On the degrees of ignorance: via epistemic logic and μ -Calculus* at [SOCREAL 2022](#).
- 2021 *Sequences of β_k -models and reflection in second-order arithmetic* at [Theory and Applications of Proof and Computation — RIMS 共同研究（公関係）](#).
- 2021 *On the μ -calculus between S4 and S5* at [1º Encontro de Logica Brasil-Colômbia](#).
- 2021 *Modal semantics for epistemic logic* at [数学基礎論若手の会 2021](#).
- 2020 *μ -calculus and Wadge Degrees* at [Proof Theory Workshop 2020](#).

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