

Curriculum Vitae

Horățiu Cheval

Personal data

Affiliation: Research Center for Logic, Optimization and Security (LOS),
Department of Computer Science,
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Education

2021 - 2024 Ph.D. in Mathematics,
University of Bucharest
2019 - 2021 M.Sc. in Computer Science
Faculty of Mathematics and Computer Science, University of Bucharest
2016 - 2019 B.Sc. in Computer Science
Faculty of Mathematics and Computer Science, University of Bucharest

Employment

Oct 2025 - present Lecturer (“*Lector univervitar*”)
Department of Computer Science, University of Bucharest
Feb 2022 - Sep 2025 Teaching Assistant (“*Asistent universitar*”)
Department of Computer Science, University of Bucharest
Jul 2024 - Jul 2025 Research Assistant
Institute for Logic and Data Science (ILDS)
Sep 2019 - Aug 2020 Teaching Computer Science
School 179, Bucharest

Publications

- \mathbb{K} definitions as Matching Logic theories, formally (with Xiaohong Chen, Dorel Lucanu and Grigore Roșu), in: N. Bertrand, S. Milius (eds.), Foundations of Software Science and Computation Structures (FoSSaCS), Lecture Notes in Computer Science, vol. 16503, Springer, 2026
- Linear rates of asymptotic regularity for Halpern-type iterations (with Laurențiu Leuștean), Mathematics of Computation, 94:1323–1333, 2025
- Rates of asymptotic regularity of the Tikhonov-Mann iteration for families of mappings, Revue Roumaine de Mathématiques Pures et Appliquées. Special number dedicated to the Tenth Congress of Romanian Mathematicians, 2024

- *Formal definitions and proofs for partial (co) recursive functions* (with David Nowak and Vlad Rusu), *Journal of Logical and Algebraic Methods in Programming*, 141:100999, 2024
- *On modified Halpern and Tikhonov-Mann iterations* (with Ulrich Kohlenbach and Laurențiu Leuştean), *Journal of Optimization Theory and Application* 197:233-251, 2023
- *Quadratic rates of asymptotic regularity for the Tikhonov-Mann iteration* (with Laurențiu Leuştean), *Optimization Methods and Software*, 37:2225-2240, 2022

Preprints

- *Quantitative metastability of the Tikhonov-Mann iteration for countable families of mappings*, arXiv:2406.03429 [math.OC], 2024

Talks

Invited talks

- *International Workshop on Program from Proofs*, Bath, September 14-15, 2025
<https://t-powell.github.io/pfp/index.html>
- *ESSLLI 2025, Workshop on programs from proofs meets formal mathematics*, Bochum, July 28 - August 1, 2025
- *Computability in Europe, Special Session: “Proof Theory: Pure and Applied”*, Lisbon, July 14-18, 2025
<https://sites.google.com/view/cie2025-computabilityineurope/>
- *MFO Workshop, Mathematical Logic: Proof Theory, Constructive Mathematics*, Oberwolfach, November 12 - 17, 2023
https://www.mfo.de/occasion/2346/www_view
- *Logic Colloquium 2023, Special Session on Applied Proof Theory*, Milan, June 5-9, 2023
<https://lc2023.unimi.it>

Contributed conference talks

- *Logic Colloquium 2024*, Göteborg, June 24-28, 2024
<https://lc2024.se/>
- *Working Formal Methods Symposium (FROM) 2023*, Bucharest, September 21 - 22, 2023
<https://from2023.cs.unibuc.ro/>
- *The Tenth Congress of Romanian Mathematicians*, Pitești, June 30 - July 5, 2023
<http://www.imar.ro/~congmatro10/>
- *Workshop for Young Researchers in Mathematics*, Bucharest, May 19-20, 2022
<https://fmi.univ-ovidius.ro/cercetare/wyrm2022/>

- *Working Formal Methods Symposium*, Timișoara, December 8-9, 2021
<https://from2021.cs.unibuc.ro/>
- *Logic Colloquium 2021*, Poznań, July 19-24, 2021
<https://lc2021.pl/>
- *Computability in Europe 2021*, Ghent, July 5-9, 2021
<https://www.cie2021.ugent.be/>
- *The 22nd annual Graduate Student Conference in Logic*, University of Illinois at Urbana-Champaign, USA, March 20-21, 2021
<https://sites.google.com/view/gsc1xxii/>

Other selected talks

- *EuroProofNet Tutorial on Usable Formal Methods for Security of Systems*, Dresden, March 27-28, 2024
<https://europroofnet.github.io/wg3-dresden24/>
- *LOS/IMAR/ILDS Logic Seminar*, Bucharest, October 19, 2023
<https://ilds.ro/logic-seminar/>
- *EuroProofNet WG3 Meeting*, Timișoara, February 8-9, 2023
<https://europroofnet.github.io/wg3-timisoara/>
- *RV/ILDS/LOS InFormal Workshop on Logics*, January 23, 2023
<https://ilds.ro/2023/01/rv-ilds-los-informal-workshop-on-logics/>

Research projects

Jul 2024 - Jul 2025	Member of the research project <i>Matching Logic, Cryptography and Blockchains</i> Institute for Logic and Data Science (ILDS) - Pi Squared
Jan 2023 - present	Member of EuroProofNet (European Research Network on Formal Proofs COST action CA20111), Working Group 3: Program verification
Oct 2023 - Dec 2023	Member of the research project <i>Matching Logic and Lean: The \mathbb{K} Connection</i> , Institute for Logic and Data Science (ILDS) - Runtime Verification (RV)
Jul 2022 - Jan 2023	Member of the research project <i>Matching Logic and Lean - Foundations</i> , Institute for Logic and Data Science (ILDS) - Runtime Verification (RV)

Scientific visits

- University of Bath (invited by Thomas Powell), May 12-16, 2025
- INRIA Lille (invited by Vlad Rusu), June 10 - 15, 2024
- INRIA Lille (invited by Vlad Rusu), September 4 - 10, 2023

Organizing committees

- Working Formal Methods Symposium (FROM) 2023 (with Nicoleta Dumitru, Ioana Leuştean, Natalia Ozunu, Andrei Sipoş, Traian Şerbănuţă), Bucharest, September 21 - 22, 2023

Edited volumes

- Proceedings of the 9th Symposium on Working Formal Methods (FROM 2025) (with Andrei Arusoaie and Radu Iosif), <https://doi.org/10.48550/arXiv.2509.11877>, 2025
- Proceedings of the 7th Symposium on Working Formal Methods (FROM 2023) (with Laurenţiu Leuştean and Andrei Sipoş), <https://doi.org/10.4204/EPTCS.389>, 2023

Scholarships and awards

- Third prize at the Student Scientific Communications Session of the Faculty of Mathematics and Computer Science, May 26, 2023
<https://fmi.unibuc.ro/noutati/sesiunea-de-comunicari-stiintifice-studentesti-premii/>
- Second prize at the Student Scientific Communications Session of the Faculty of Mathematics and Computer Science, May 18, 2021
<https://fmi.unibuc.ro/noutati/sesiunea-de-comunicari-stiintifice-studentesti-premii/>
- Bitdefender research scholarship, March - July 2020
<https://sla.cs.unibuc.ro/ro/castigatorii-burse-si-premii-bitdefender/>

Teaching

- *Basic tools and techniques in computer science* lecture, 2025/2026
- *Logic for Multiagent Systems* lab, 2021 - present
- *Operating Systems* lab, 2021 - present
- *Mathematical and Computation Logic* lab, 2022 - present
- *Formal Languages and Automata Theory* seminar, 2021 - present
- *Mathematical Logic* seminar, 2021 - present
- *Programming Languages Fundamentals* lab, Spring Term, 2021 - present
- *Basic tools and techniques in computer science* lab, 2024/2025
- *Functional programming* lab, 2024/2025

Administrative duties

2021 - 2024 Student member of the Council of the Doctoral School of Mathematics,
University of Bucharest