Dóra Cziborová

PhD Student in Formal Verification

cziborova@mit.bme.hu ✉
0009-0003-5624-1372 (iD)

🎓 Education and Degrees

2024–present **Computer Science PhD**, *Doctoral School of Informatics, Budapest University of Technology and Economics*, research topic: Formal Verification of Real-time Software-based Systems.

2022–2024 **Computer Science Engineering MSc**, *Budapest University of Technology and Economics*, specialization in critical systems, graduated with highest honours, participant of the IMSc program.
Master's thesis: Abstraction-based Timed Model Checking for Software-intensive System Models

2018–2022 **Computer Science Engineering BSc**, *Budapest University of Technology and Economics*, graduated with highest honours, participant of the IMSc program.
Bachelor's thesis: Generalizing Lazy Abstraction Refinement Algorithms with Partial Orders

💡 Skills

Languages   Hungarian (native), English (advanced), Slovak (advanced), German (passive)
Research   formal verification, model checking, timed systems, CEGAR, lazy abstraction
Development   Java, Python, C, C++, Kotlin, C#

📄 Publications

2024 **Modeling of Time-Dependent Behavior in Fault-Tolerant Systems**, *Dóra Cziborová and Richárd Szabó*, 31st Minisymposium of the Department of Measurement and Information Systems of the Budapest University of Technology and Economics.

📄 Students' Scientific Conference Papers

2023 **Abstraction-based Model Checking for Real-time Software-intensive System Models**, *Dóra Cziborová*, Students' Scientific Conference of the Faculty of Electrical Engineering and Informatics of the Budapest University of Technology and Economics.
1st prize

2022 **Abstraction-based Model Checking Techniques for Real-time Systems**, *Dóra Cziborová and Béla Ákos Vizi*, Students' Scientific Conference of the Faculty of Electrical Engineering and Informatics of the Budapest University of Technology and Economics.
2nd prize

🖥 Open Source Contributions

2021–present **Theta**, *a generic, modular and configurable formal verification framework supporting various formalisms and algorithms (github.com/ftsrg/theta).*

🌐 Experience

2023   **15th Alpine Verification Meeting (AVM)**, *Presentation: Combining CEGAR and Lazy Abstraction for Verifying Timed Systems*.

📘 Teaching

2023–present   **Formal Methods**.
assembling and grading homework assignments, scoring exams

2023   **Languages and Automata**.
scoring exams

2020-2021   **Databases**.
delivering classroom practices, scoring exams

2019   **Basics of Programming 1**.
delivering laboratory practices