

# Cezar-Constantin Andrici

Universitätsstraße 140, 44799, Bochum, Germany  
cezar.andrici@mpi-sp.org—<https://cezarandrici.com>

## Education

10/2021-2026	<b>Ph.D. candidate</b> in Computer Science at <b>MPI-SP</b> , Germany Subject: <i>Secure compilation of verified effectful F* programs to ML</i> . Advised by Cătălin Hrițcu.
2019–2021	<b>M.Sc.</b> in Computer Science from <b>UAIC</b> , Romania Thesis: <i>Enforcing trace properties on the interoperability between F* and ML using hybrid verification</i> . Advised by Ștefan Ciobâcă and Cătălin Hrițcu.
2019–2021	<b>M.A.</b> in Regional Development from <b>UAIC</b> , Romania Thesis: <i>Governance, Resilience and Absorption of Structural and Cohesion Funds in Central and Eastern Europe: A Case Study</i> . Advised by Ramona Țigănașu.
2015–2019	<b>B.Sc.</b> in Computer Science from <b>UAIC</b> , Romania Thesis: <i>Proving SAT Solving Algorithms and Data Structures in Dafny</i> . Advised by Ștefan Ciobâcă.

## Publications

Conferences	<b>SecRef*</b> : Securely sharing mutable references between verified and unverified code in F*. C.-C. Andrici, D. Ahman, C. Hrițcu, R. Icleanu, G. Martínez, E. Rivas, and T. Winterhalter. <i>ICFP</i> , 2025
Journals	<b>Securing verified IO programs against unverified code in F*</b> . C.-C. Andrici, Ș. Ciobâcă, C. Hrițcu, G. Martínez, E. Rivas, É. Tanter, and T. Winterhalter. <i>POPL</i> , 2024
Informal	<b>A verified implementation of the DPLL algorithm in Dafny</b> . C.-C. Andrici and Ș. Ciobâcă. <i>Mathematics</i> , 2022
	<b>Towards formally secure compilation of verified F* programs against unverified ML contexts</b> , C.-C. Andrici, D. Ahman, C. Hrițcu, G. Martínez, A. Pribisova, E. Rivas, and T. Winterhalter. Submitted to PriSC, 2026
	<b>Verifying non-terminating programs with IO in F*</b> , C.-C. Andrici, T. Winterhalter, and C. Hrițcu. <i>HOPE</i> , 2022
	<b>Partial Dijkstra Monads for all</b> , T. Winterhalter, C.-C. Andrici, C. Hrițcu, K. Maillard, G. Martínez, and E. Rivas. <i>TYPES</i> , 2022
	<b>Gradual enforcement of IO trace properties (poster)</b> 🥇 1st prize at Student Research Competition of ICFP 2020 (graduates section)

## Research projects

2023–2025	<b>SCIO*</b> and <b>SecRef*</b> are two verified secure compilation frameworks for verified IO/stateful F* programs. The resulting compiled program is guaranteed to have the same <i>integrity</i> , <i>data confidentiality</i> and <i>code confidentiality</i> as in the source language when linked against adversarial unverified code. The frameworks are implemented and verified in F*. I'm the lead author for both of them.
2022	<b>TrueSAT</b> is a SAT solver implemented in Dafny and verified to be sound, complete and terminate. It implements the DPLL algorithm. I'm the lead author.

## Experience

02/2020-07/2021	<b>Research intern</b> at <b>UAIC</b> , advised by Ștefan Ciobâcă
07-10/2020	<b>Research intern</b> at <b>MPI-SP</b> in the FOVSEC group, advised by C. Hrițcu
07-11/2019	<b>Research intern</b> at <b>Inria Paris</b> in the Prosecco team, advised by C. Hrițcu and E. Rivas
12/2017-06/2019	<b>System Administrator</b> at <b>UAIC</b> , Romania
11/2015-11/2017	<b>CTO</b> at <b>CTF365</b> (Cyber security start-up), Romania
07-10/2015	<b>Software Development Intern</b> at <b>Amazon Development Center</b> , Romania

## Skills

<b>P. Languages</b>	Wrote professional software in F*, Dafny, Rocq, OCaml, C++, JavaScript, Ruby, SQL, PHP. Other languages include Python, Haskell, Solidity and C#.
<b>Languages</b>	Romanian (native), English (proficient), German (beginner)

## Teaching Assistant

2024 Fall	Proofs are Programs, Graduate level course, RUB, Germany
2023 Summer	Functional Programming, Undergraduate level course, RUB, Germany
2020 Fall	Logics in Computer Science, Undergraduate level course, UAIC, Romania

## Community Service

Sub-reviewer	CPP'26, ICFP'25, POPL'24, SP'2021
AEC Member	POPL'26, POPL'23
Student volunteer	POPL'24, POPL'23, ICFP'22, PLDI'20, POPL'20, ETAPS'19, FROM'18