

Iulian Oleniuc

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Education

Master's Degree

2023–2025

Institution: Faculty of Computer Science Iași

Program: Advanced Studies in Computer Science

Thesis: In my [MSc thesis](#), “A Hybrid Key-Policy Attribute-Based Encryption Scheme for Universal Circuits, Based on Monotone Span Programs,” building on top of the Hu–Gao and Goyal et al. schemes, I developed the **pairing-based KP-ABE** scheme with, I argue, **the highest degree of generalization**. A paper on part of this work was accepted at the **CSJM 2025** journal.

Thesis grade: 9.5

Bachelor's Degree

2020–2023

Institution: Faculty of Computer Science Iași

Thesis: In my [BSc thesis](#), “Heuristic Optimizations for Boolean Formulas with Applications in Attribute-Based Encryption,” I developed four heuristics to **optimize monotone Boolean formulas**. These optimizations enhanced the performance of a **circuit-based KP-ABE** scheme by up to 60% in real-world scenarios. A paper on this work was accepted at the **KES 2023** conference.

Thesis grade: 10

High School

2016–2020

Institution: Colegiul Național “Emil Racoviță” Iași

Specialization: Mathematics–Informatics

Contests

Algorithms

High School

National Olympiad in Informatics: Participation (9th grade), Bronze (10th grade), Silver (11th grade), Qualification (12th grade)

Cloudflight Coding Contest: 1st place (11th grade), 2nd place (12th grade), 1st place (1st year of BSc)

ICPC Regional Contest Iași: 1st place (3rd year of BSc)

Miscellaneous

All-Time

Cloudflight Coding Contest (AI): 1st place (3rd year of BSc), 1st place (1st year of MSc)

InfoEducație County Contest: 2nd place (11th grade)

Languages

- Romanian — Native
- English — Advanced

Skills

- Problem solving
- Teaching
- Technical writing
- Teamwork
- Critical thinking

Knowledge

- Algorithms
- Data structures
- Cryptography
- Machine learning
- Neural networks
- Web developing
- Relational databases
- Object-oriented programming

Technologies

- C++, Java, Python
- HTML, CSS, JavaScript
- React, Vue
- Gatsby, Nuxt, Astro
- Firebase, SupaBase
- PostgreSQL

Passions

- Cycling
- Books
- Movies
- Hip-hop

Publications

LSSS Limitations Over Boolean Circuits

2025

A paper co-authored with Alex Ioniță, published in [CSJM, 33\(1\), 2025](#). It offers a gentle introduction into the realm of monotone span programs, linear secret sharing schemes, and attribute-based encryption.

Boolean Circuit Optimizations for ABE

2023

A paper co-authored with Alex Ioniță and Denis Banu, published at the [KES 2023](#) conference. It introduces four heuristics for optimizing Boolean circuits in key-policy attribute-based encryption schemes.

Projects

InfoGenius.ro — Computer Science Blog

2017–2025

I founded [InfoGenius](#) in the 9th grade and have since written posts on topics such as famous algorithms, data structures, C++ programming, and National Olympiad problems, among others. With **over 300 comments**, the website has made a meaningful impact in **helping people** learn computer science, particularly in competitive programming.

InfoGym — Teaching Computer Science

2022–2025

InfoGym is a programming circle founded by eMAG as part of the “**Hai la Olimpiadă!**” program, where I have delivered several lectures to middle and high school students. This involved creating instructional papers, including “[Introduction to Combinatorics](#)” and “[Trie & the Knuth–Morris–Pratt Algorithm](#),” which are among my proudest works.

FIICode — Organizing a Programming Contest

2021–2024

[FIICode](#) is a programming contest organized by students of the Faculty of Computer Science Iași. I contributed to the **organizing and scientific committees** for the 2021–2024 editions, focusing on algorithms. My responsibilities included designing problem ideas, generating test data, and preparing problem statements and editorials.

ICPC Training Camps — Being a Coach

2024

I participated in two **ICPC training camps** in 2024, coaching teams from the Faculty of Computer Science Iași. The camps took place in Osijek, Croatia, and Wrocław, Poland, where I also served on the scientific committee at the latter. Additionally, I coached at SEERC 2024 in Bucharest.

CruceaRosielasi.ro — Website for the Iași Red Cross

2022

I developed a [fast, user-friendly website](#) for the Iași Red Cross using modern web technologies like Vue, Nuxt, and Firebase. The site includes an admin panel with a minimalist yet powerful **content management system**.