

## Cristian Frâncu

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## Summary and Areas of Interest

Cristian is not used to giving out his CV, but to his surprise, in the age of Google and LinkedIn, some people still want it. Cristian is a computer professional fascinated by the world of computing. America adopted him when he was young. Upon arrival he worked on and almost finished his Ph.D. at Rutgers University, being saved at the last moment by his Ph.D. advisor who snatched him and lured him to a small company named Google. Amazingly, two other Romanians were already working there, so Cristian was Romanian Guy number 3. Post-Google, Cristian has been learning to invest. He found out that spending money is as hard as making it.

As for interests, he likes quite a few things, especially Science. But if you're reading this you're probably interested in Cristian's academic, sober interests, such as Algorithms Theory, Artificial Intelligence, Machine Learning, Music Information Retrieval. To summarize his expertise, it is mostly in algorithms and data structures, and all sorts of languages he's programmed in. He won't list them here, if he's needed to work with one chances are he might know it.

## Research Experience

9/1999–8/2000: Research Assistant, Department of Computer Science, Rutgers University

9/1996–9/1999: Research Assistant, Center for Advanced Information Processing, Rutgers University

Doing research while working on your Ph.D. thesis is quite unavoidable. Nice to be paid for it too.

5/1998–8/1998: Summer Researcher, NEC, CCRL, Princeton NJ

Three months of fun in Princeton, at this great Nippon research laboratory. CORBA was big back then, not his fault for what he did there:

- Implementing the C++ mapping of CORBA—Delegation Model vs. Inheritance Model
- Automatic porting of legacy applications to CORBA using Delegation Model

## Teaching Experience

9/2012–6/2015: Instructor at National College Tudor Vianu. Cristian taught Computer Science and Programming to gifted children ages 10 to 14.

9/1995–8/1996: Teaching Assistant at Polytechnic University of Bucharest for the following courses:

- Data Structures and Algorithms
- Introduction to Artificial Intelligence
- Formal Languages and Compilers

2/1993–8/1996: Instructor at Youth Club, Bucharest for the Algorithms and Pascal Language course. Cristian worked with gifted teenagers, preparing them for the National Programming Contest.

## Industry Experience

9/2000–3/2005: Software Engineer, Google Inc., Palo Alto CA

Being a Software Engineer at Google means a lot of fun and a lot of power. And with great power comes great responsibility, as respected, well-known figure Spiderman says. And who are our role models if not some cartoon characters?

6/2000–8/2000: Summer Intern Engineer, Gigabeat, Inc. Palo Alto CA

Ever listened to music all day, then reported to your boss that you surveyed and analyzed the Beatles beats and rhythms? Lucky Cristian, that was his job for three entire months! They called what he was doing “media processing and feature extraction in MIDI files”. Nice.

6/1995–5/1996: part-time Computer Programmer at MITh, Bucharest

Those university summer vacations weren't going to pay for themselves. Cristian had a good time, though, got a chance to learn databases.

## Education

MS, Department of Computer Science, Rutgers University, NJ, USA (2000)

Yet another Ph.D. dropout. Sigh...

MS, Department of Computer Science, Polytechnic University of Bucharest, Romania (1996)

BS, Polytechnic University of Bucharest, Romania, major in Computer Science (1995)

Proud to have survived Electronic Circuitry and Devices class! Many students got brain scars for life.

## Honors and Awards - Selection

Romanian Parliament Excellence Award for special efforts in educating children, 2015  
Education Ministry Award for teaching children with outstanding results at international contests, 2015  
Waksman Institute of Microbiology, Rutgers University Scholar, 2000–2001  
Rutgers Distributed Laboratory for Digital Libraries Scholar, 1999–2000  
Several medals at Programming Contests such as ACM in undergrad and high school years

## Publications - Selection

Francu, C. & Nevill-Manning, C.G. (2000) “Distance metrics and indexing strategies for a digital library of popular music,” *IEEE International Conference On Multimedia And Expo*.

Francu, C. & Marsic, I (1999) “An Advanced Communication Toolkit for Implementing the Broker Pattern,” *19th IEEE International Conference for Distributed Computing Systems*, 458–467.

Francu, C. (1996) “Source Code Compression Using Context Free Grammars” *M.S. dissertation*.

## Books

Florea, A., Dorohonceanu, B., and Francu, C. (1997) “PROLOG Programming,” *Politehnica University Printing House*.

## Educational, Software and Hardware Projects - Selection

“Vianu Arena“ (varena.ro), Computer Science National College Tudor Vianu, 2012-present  
Co-founder, main contributor and administrator of this public programming problems and contest server

“Algopedia” (algopedia.ro), a collection of ~180 lessons of computer science and data structures, 2012-present  
Founder, main contributor and administrator of this public educational site

“Children Aid,” a non-profit organization based in the US, 2005-present  
Board member and donor at this NGO that fosters children education in Romania, by collecting over 50,000USD annually from US donors.

“Google Mini,” (actually Google Search Appliance), Google Inc., 2000-2001  
AKA “Google in a Box”, a computer cluster for internal Enterprise search, containing most of the Google code

“Server Data Collection,” Google Inc., 2000-2001  
A collection of libraries collecting real time data for post mortem analysis of queries taking unusually long

## Software Tool Expertise

- C, C++, Java, Python, Pascal, Prolog, and a few other more or less fun programming languages
- Compiler compilers such as Lex, Yacc, JavaCC, etc
- GNU/Linux operating system and network programming (Cristian has been hosting and maintaining several web sites and his family's email server on his computer server at home)
- Publishing systems: Mediawiki (without which I could not have created Algopedia), Wordpress
- CORBA (Common Object Request Broker Architecture)

## Languages

English, Romanian

## Hobbies

Scientific Projects, House Construction, Computer Games, Music, Karate-Do, B&W photo processing

## References

Google. LinkedIn. More available on request.