

## Cristian Frâncu

Computer Scientist

[cristian@francu.com](mailto:cristian@francu.com)

<http://cristian.francu.com/>

+(40)72 313 5826

+(40)31 425 6552

San Francisco, CA, USA



## Areas of interest

Algorithm Theory, Artificial Intelligence, Machine Learning, Music Information Retrieval

## Research Experience

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

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

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

- 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. I taught Computer Science and Programming to gifted children ages 10 to 14. Worked with over 100 students every year, raised more than 50 students who made it to the National level. In 2015 I taught 40 out of 56 students from Bucharest who entered the National stage. In the same year 7 out of 12 students who entered the special team who prepared for the international contests were taught by me. Two of them were 6<sup>th</sup> grade, a first in the history of the special team.

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. I worked with gifted teenagers, preparing them for the National Programming Contest.

## Industry Experience

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

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

- Media processing and feature extraction in MIDI files

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

## Education

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

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

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

## Honors and Awards

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)

- "ONI Gim 2016" (oni2016.ro), National Computer Science Olympiad, April 2016  
Co-organizer of the event. Some 400 students and 100 professors attended. Raised private and local funding, negotiated with hotels, checked contest centers and computers, organized opening and award ceremonies, organized final party, etc.
- "Frâncu Foundation" (francu.org), March 2016-present  
Founder, board member and donor at this NGO that fosters children education in Romania, by collecting funds annually from local sources.
- "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. Contributed 80 original problems and added a total of 300 problems out of 600.
- "Algopedia" (algopedia.ro), 2012-present  
Founder, main contributor and administrator of this public educational site. Algopedia is a collection of ~180 lessons of computer science and data structures.
- "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 sources.
- "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, LISP, ML, many other programming languages
- GNU/Linux operating system and network programming
- Compiler compilers such as Flex, Bison, JavaCC
- Publishing systems: Mediawiki, 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

Available on request