

Jure Slak

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date of birth: 20. december 1993
Office S7, "Jožef Stefan" Institute
Jamova cesta 39, 1000 Ljubljana, Slovenia

EDUCATION

Currently 1st year PhD student of Mathematics at Faculty of Mathematics and Physics, University of Ljubljana, Slovenia

- Master's thesis grade 10 out of 10
September 2017 with average study grade of 10.00
- Bachelor's thesis grade 10 out of 10
with average study grade of 9.91

September 2015

WORK HISTORY

- PhD researcher
October 2017 – present
"Jožef Stefan" Institute

Working on a library for PDE solving using meshless methods with concrete applications in fretting fatigue of materials.

- Teaching assistant
October 2017 – present
Faculty of Mathematics and Physics
University of Ljubljana

Teaching 3rd year undergrad course on data structures and algorithms.

- Software Engineering Intern
Summer 2016
Google Inc., Zürich, Switzerland

Worked on Gmail Analytics team. I established an end to end anomaly detection system that analyses billions of time series per day, extracts and orders anomalies and displays them to the analysts through our frontend.

- Student research assistant
August 2015 – September 2017
Laboratory for Parallel and Distributed Systems
"Jožef Stefan" Institute

Collaborated in a team of three people to develop a production system for Slovenian Electricity Transmission System Operator to alert of possible icing conditions and calculate the amount of needed electrical current to prevent it. This included the development of the mathematical model, implementation, testing against field measurements and numerical testing, implementation with a web interface for manual simulations and controls, connecting many different data sources. The system was launched on schedule and runs live without any reported outages.

Collaborated in development of a PDE solver – implemented domain discretization algorithms and used it to solve fluid flow problems and do ECG detection, resulting in a published paper.

- Software Engineering Intern
Summer 2014
Google Inc., Mountain View, California

Worked on Gmail spam detection system. I worked on transitioning the spam detection system to a new reputation based model, more specifically, I developed a tool that saves the reputation history of a feature and allows programmatic access for querying as well as linking it to the frontend tool used by analysts.

- Student teaching assistant
October 2013 – present
Faculty of Mathematics and Physics
University of Ljubljana

Teaching course “Computing Laboratory” for students of Mathematics and students of Physics. Included preparing lectures and exercises, giving lectures and leading lab exercises, preparing and grading exams for ~ 100 students every year, 10 hours per week.

- Software developer (summer job) Summer 2013, 2012, 2011
Javna Razsvetljava d.d, Ljubljana, Slovenia
 Programmed AVR microcontrollers for public light system, helped develop a system which allowed to monitor and control every component in Ljubljana’s highway lighting system.
- Leading a school programming club September 2012 – present
Gimnazija Vič, St. Stanislav’s Institution (only 2014 and 2015), Ljubljana
 Teaching around 30 high schoolers from basic programming, algorithmic and computer skills one afternoon per week. After a year, all of them made a simple project, eg. a computer game.
- Other projects
 - Collaborated in development of economic model using to model investment risk in renewables with stochastic methods. I arrived in the middle of the project to add some additional modules and improve the computational speed. I improved the speed by factor of 8 and made it possible to store, load and display the results of analyses.
 - Solved and implemented solutions for algorithmic tasks
 (see: <https://bitbucket.org/jureslak/codebook>)
 - Developed small desktop applications using SDL and OpenGL

AWARDS and SCHOLARSHIPS	Faculty Prešern’s award	2017
	Dean’s award	2013, 2015 – 2017
	Slovenian ACM - ICPC	
	• 1st place	October 2017
	• 3rd place	October 2016
	• 2nd place	October 2015
	• 2nd place	October 2014
	• 1st place	October 2013
	• 3rd place	October 2012
	International Olympiad in Informatics	
	• Bronze medal (Sirmione, Italy)	September 2012
	• Participated (Pattaya, Thailand)	July 2011
	Baron Sigmund Zois von Edelstein Scholarship	September 2008 – September 2017

SKILLS

- Good knowledge and experience in C++, Python, Java,
- Good knowledge of common algorithms
- Familiar with MATLAB, Mathematica, R
- Solving problems using mathematical background
 (numerical methods, mechanics, statistics)

- Familiar with web technologies (HTML, CSS, JS, Less, jQuery, Bootstrap, PHP, SQL; example: <http://gimvic.org>)
- Familiar with Windows and Linux
- Familiar with version control systems (Git, Mercurial) and unit test frameworks (Google Test, JUnit, unittest)
- Completed CCNA Exporation: Network Fundamentals course

LANGUAGE SKILLS

- Slovenian: native language
- English: fluent (speaking, reading, writing)
- German: basic (speaking, reading, writing)

VOLUNTEER WORK

- Member of committee for high school and student programming contests at ACM Slovenia
- President of the student council October 2016 – October 2017
- Member of the student council October 2015 – October 2016
- Tutor for younger students at university 2013 – 2017
- Preparing high school students for American Computer Science League and accompanied them to one week competition every year (our team was top 3 in 2015, 16, and 17) 2012 – present
- Teaching first aid to elementary school children and helped organize first aid awareness events and competitions 2007 – 2011

PUBLICATIONS

- Slak J., Kosec G. (2016). Detection of Heart Rate Variability From a Wearable Differential ECG Device, DC VIS Mipro proceedings, Croatia, Opatija, 30. May 2016.