Jure Slak date of birth: 20. december 1993
jure.slak@ijs.si, jure.slak@fmf.uni-lj.si Office S7, "Jožef Stefan" Institute
+386 1 477 3114 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 September 2015
  with average study grade of 9.91

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, 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

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

- 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.