

Petar Ivanov

born: 29 MAY 1989 in Shumen, Bulgaria
address: Manessestrasse 64, Zurich 8003, Switzerland
email: peter.ivanov89@gmail.com
site: pesho.info



SUMMARY

Graduate with solid background in algorithms and data structures.
Winner of programming competitions. Did multiple Bio&IT research internships.
Loves teaching and communicating science. Worked as a Software engineer at Google.

SKILLS

Algorithms: Graphs, Combinatorics, Strings, Geometry, Optimization, Dynamic Programming
Programming: C / C++ (STL), Python (NumPy, SciPy, Matplotlib), Ruby, MATLAB
Tools: Unix, Bash, Vim, Git, \LaTeX
Speaks: English, Russian, Bulgarian

EDUCATION

APR 2015 — FEB 2017	Master degree in Software Engineering (<i>extra-mural</i>) Thesis: <i>Framework for Genomic Reconstruction Algorithms</i> Shumen University, Bulgaria
SEP 2009 — JUN 2013 (interrupted by visa issues)	Specialist degree (<i>equivalent to Master</i>) in Applied Mathematics and Informatics Moscow State University, Russia // calculus, Computer vision ↓ transferred because of an administrative ban to enter Russia
JUN 2014	Got a Bachelor degree in Computer Informatics Shumen University, Bulgaria
SEP 2008 — JUN 2009 (moved to Moscow University)	Bachelor degree in Computer science // + led seminars in advanced algorithmics Sofia University, Bulgaria // mainly discrete maths
SEP 2000 — JUN 2008	Mathematics and Physics profile // award for most scientific achievements of his year Shumen High school of Sciences, Bulgaria

Additional:

SEP 2011 — JUN 2013	Master degree (<i>not accredited</i>) in Bioinformatics // + taught algorithms to biologists Yandex School of Data Mining, Moscow, Russia
JAN 2011	VISION AND MACHINE-LEARNING RESEARCH SCHOOL, ENS Lyon, France
JUL 2008	RUSSIAN SUMMER INFORMATICS CAMP, Kostroma, Russia // 3 weeks of problems and theory
AUG 2007	PHYSICS CAMP, Panitsite, Bulgaria // 3 weeks of maths and physics
2004 — 2007	SUMMER RESEARCH INFORMATICS CAMP, Varna, Bulgaria // 2-week problem solving
2001 — 2008	MATHEMATICS AND INFORMATICS PRIVATE SCHOOL "A&B", Shumen, Bulgaria

INDUSTRY

SEP 2014 — Software Engineer at Search \supset Knowledge \supset Infrastructure
NOW Google Zurich // big data and pipelines

INTERNSHIPS

JUN 2016 — Internship on modern biotech technologies
NOW // Genome assemblers, Single-cell transcriptomics, T-cell receptor reconstruction, Machine learning supervised by Prof. Martin Vechev, [Software Reliability Lab](#), [ETH Zurich](#) collaborating with PD Dr. Emmanuella Guenova, [Dermatology Clinic](#), [University of Zurich](#)

JUL 2013 — Summer internship on [SPAdes](#) open source genome assembler // [chimeras presentation](#)
AUG 2013 // proof of concept: replication bugs to enhance assembly in open source assembler supervised by Dr. Pavel Pevzner, [Algorithmic Biology Lab](#), [St. Petersburg Academic University](#)

SEP 2012 — Microbiological models designer // [Microcin modelling](#)
JUN 2013 supervised by Prof. Konstantin Severinov, [Institute of Gene biology](#), [Russian Academy of Sciences](#)

JUL 2012 — Research internship on probabilistic verification of biological models
AUG 2012 // insisted on my own topic on virus-bacteria interaction [\[Summary\]](#) supervised by Prof. Martin Vechev, [Software Reliability Lab](#), [ETH Zurich](#)

JUL 2011 — Computational Geometry Algorithms Library ([CGAL](#)) internship
AUG 2011 [Google Summer of Code](#) // implemented topological operators on tetrahedral meshes

JUL 2007 — Developer of a bin-packing genetic algorithm for glass cutting optimization
SEP 2007 [Telepol Net](#), [Bulgaria](#) // appreciating evolution and first algorithm in production

TEACHING

SEP 2015 (EXP.)	Supervisor of high school students // leading an evolutionary computational project <i>Science&Arts school "Science Xplore", Viseu, Portugal</i>
NOV 2013 – JUN 2014	Students informatics competitions trainer // meanwhile sketching an algorithmic textbook <i>Mathematics and Informatics Private School "A&B", Shumen, Bulgaria</i>
NOV 2013 – JAN 2014	Technical Assistant in a Coursera <i>Bioinformatics course</i> // lectures editing, forum explanations <i>supervised by Dr. Pavel Pevzner, University of California, San Diego</i>
AUG 2010	Lecturer at school students informatics camp // strongest Russian competitors <i>Russian Summer Informatics Camp, Saratov</i>
MAR 2008 – JUN 2009	Assistant in "Design and Analysis of Algorithms" course // led seminars to a group of 20 people <i>Faculty of mathematics and informatics, Sofia University, Bulgaria</i>
SEP 2008 – JUN 2009	Jury, organizer, tester and author of the problems in <i>Online programming tournament</i> <i>Musala Soft, Bulgaria</i> // mainly discrete optimization problems
SEP 2008 – JUN 2009, 2013 – 2014	Author of problems for Bulgarian Tournaments in Informatics Lecturer at National Informatics Camps <i>National Committee in Informatics, Bulgarian Ministry of Education</i>

AWARDS

the competitions are National Bulgarian if nothing else stated

1 st place	“MINKO BALKANSKI” COMPETITION IN INFORMATICS ’08
11 th place	TOPCODER HIGH SCHOOL FINALS, WEST LAFAYETTE, USA ’08
1 st place	AUTUMN TOURNAMENT IN INFORMATICS ’07
1 st place	STUDENT COMPETITION FOR THE DEAN’S CUP OF SOFIA UNIVERSITY ’07
2 nd place	INTERNATIONAL YOUNG PHYSICISTS TOURNAMENT (REGIONAL, IN TEAM) ’06
1 st place	“RUMEN GROZDANOV” INFORMATICS AND MATHEMATICS TOURNAMENT ’06
1 st place	WINTER TOURNAMENT IN INFORMATICS ’06

- Awarded as a **National Laureate in Informatics**, Bulgaria ’08
- Scholarship for **science achievements** of [AMERICAN FOUNDATION FOR BULGARIA](#) ’07—’08
- Participated in the **final rounds** of the BULGARIAN OLYMPIAD IN INFORMATICS ’05—’08
- Participated in the **final rounds** of the [TOPCODER HIGH SCHOOL](#), West Lafayette, USA ’07—’08
- Participated in the **final rounds** of “[MUSALA SOFT AND PC MAGAZINE](#)” competition ’07—’08

ACTIVITIES

-
- | | |
|---|--|
| • Solving algorithmic problems | // TOPCODER , TIMUS , ROSALIND |
| • Supporting open-source | // GitHub profile |
| • Founded a project for describing educational systems | // students-abroad.info |
| • Enjoying hiking, biking, dancing, paragliding and running | // 42.195km in 3:43h , Zelenograd, Russia, Dec 2011 |
| | // 100km in 13:19h , Vitosha mountain, Bulgaria, 2012 |