

Pesho Ivanov



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SUMMARY

PHD STUDENT AT ETH ZURICH WITH STRONG BACKGROUND IN COMPUTATIONAL BIOLOGY, ALGORITHMS AND DATA STRUCTURES. ALWAYS ENJOYED INFORMATICS COMPETITIONS. WORKED AS A SOFTWARE ENGINEER AT GOOGLE. LOVES TEACHING AND COMMUNICATING SCIENCE.

EDUCATION

APR 2017 — NOW	PHD STUDENT ON Reliable Computational Biology <i>Prof. Martin Vechev's</i> SECURE, RELIABLE, AND INTELLIGENT SYSTEMS LAB (SRI) COMPUTER SCIENCE DEPARTMENT ETH ZURICH, SWITZERLAND
APR 2015 — FEB 2017	MASTER DEGREE IN Software Engineering (<i>extra-mural</i>) THESIS: <i>Framework for Genomic Reconstruction Algorithms</i> SHUMEN UNIVERSITY, BULGARIA
JUN 2014	BACHELOR DEGREE IN Computer Informatics SHUMEN UNIVERSITY, BULGARIA ↑ TRANSFERRED BECAUSE OF A CRAZY BAN FROM ENTERING RUSSIA
SEP 2009 — JUN 2013 (interrupted by visa issues)	SPECIALIST DEGREE (<i>equivalent to Bachelor+Master</i>) IN Applied Mathematics and Informatics MOSCOW STATE UNIVERSITY, RUSSIA // CALCULUS, COMPUTER VISION
SEP 2008 — JUN 2009 (left to Moscow)	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
<i>Additional:</i>	
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

INTERNSHIPS

JUN 2016 – MAR 2017	BIOINFORMATICS INTERNSHIP ON SINGLE-CELL TRANSCRIPTOMICS LYMPHOMA PATIENTS <i>Prof. Martin Vechev, Software Reliability Lab, ETH Zurich</i> <i>PD Dr. Emmanuella Guenova, Dermatology Clinic, University of Zurich</i>
JUL 2013 – AUG 2013	SUMMER INTERNSHIP ON SPADES OPEN SOURCE GENOME ASSEMBLER // CHIMERAS PRESENTATION // PROOF OF CONCEPT: REPLICATION BUGS TO ENHANCE ASSEMBLY IN OPEN SOURCE ASSEMBLER <i>Prof. Pavel Pevzner's, Algorithmic Biology Lab, St. Petersburg Academic University</i>
SEP 2012 – JUN 2013	MICROBIOLOGICAL MODELS DESIGNER // MICROCIN MODELLING <i>Prof. Konstantin Severinov's lab, Institute of Gene biology, Russian Academy of Sciences</i>
JUL 2012 – AUG 2012	RESEARCH INTERNSHIP ON PROBABILISTIC VERIFICATION OF BIOLOGICAL MODELS // INSISTED ON MY OWN TOPIC ON VIRUS-BACTERIA INTERACTION [SUMMARY] <i>Prof. Martin Vechev's, Software Reliability Lab, ETH Zurich</i>
JUL 2011 – AUG 2011	COMPUTATIONAL GEOMETRY ALGORITHMS LIBRARY (CGAL) INTERNSHIP GOOGLE SUMMER OF CODE // IMPLEMENTED TOPOLOGICAL OPERATORS ON TETRAHEDRAL MESHES
JUL 2007 – SEP 2007	DEVELOPER OF A BIN-PACKING GENETIC ALGORITHM FOR GLASS CUTTING OPTIMIZATION <i>Telepol Net, Bulgaria</i> // APPRECIATING EVOLUTION AND FIRST ALGORITHM IN PRODUCTION

TEACHING

SEP 2015 AND SEP 2018	SUPERVISOR OF HIGH SCHOOL STUDENTS <i>Science&Arts school "Science Xplore", VISEU, PORTUGAL</i>
NOV 2013 – JUN 2014	INFORMATICS COMPETITIONS TRAINER FOR HIGH SCHOOL STUDENTS <i>Mathematics and Informatics Private School "A&B", SHUMEN, BULGARIA</i>
NOV 2013 – JAN 2014	TEACHING ASSISTANT IN A Coursera BIOINFORMATICS COURSE <i>Prof. 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	TEACHING ASSISTANT IN "DESIGN AND ANALYSIS OF ALGORITHMS" COURSE <i>Faculty of mathematics and informatics, Sofia University, BULGARIA</i>
SEP 2008 – JUN 2009	AUTHOR OF THE PROBLEMS IN ONLINE PROGRAMMING TOURNAMENT <i>Musala Soft, Bulgaria</i> // MAINLY DISCRETE OPTIMIZATION PROBLEMS
2008 – 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>

INDUSTRY

SEP 2014 — SOFTWARE ENGINEER AT SEARCH \supset KNOWLEDGE \supset INFRASTRUCTURE
JAN 2016 *Google Zurich*

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

GENERAL SKILLS

ALGORITHMS: GRAPHS, COMBINATORICS, STRINGS, GEOMETRY, OPTIMIZATION, DYNAMIC PROGRAMMING
PROGRAMMING: C / C++ (STL), PYTHON (NUMPY, SCIPY, MATPLOTLIB), RUBY, MATLAB
TOOLS: UNIX, BASH, VIM, GIT, ~~TEX~~
SPEAKS: ENGLISH, RUSSIAN, BULGARIAN

ACTIVITIES

- SOLVES ALGORITHMIC PROBLEMS // [TOPCODER](#), [TIMUS](#), [ROSALIND](#)
- LOVES OPEN-SOURCE
- ENJOYS HIKING, BIKING, DANCING, PARAGLIDING AND RUNNING // [42.195km in 3:43h](#), [ZELENOGRAD](#), RUSSIA, DEC 2011
// [100km in 13:19h](#), [VITOSHA MOUNTAIN](#), BULGARIA, 2012