Curriculum vitae

PERSONAL INFORMATION

Ivo Ugrina, PhD

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www.iugrina.com

hr.linkedin.com/pub/ivo-ugrina/94/74/64a

Gender Male | Date of birth 21 May 1983

WORK EXPERIENCE

October 2015 - Present

Visiting Lecturer

King's College London
London, United Kingdom

Development and application of computational and statistical methods for Microbiome and Glycomics data in the Department of Twin Research.

May 2015 - Present

Experienced researcher

University of Zagreb
Trg maršala Tita 14, 10000 Zagreb, Croatia

Development and application of computational and statistical methods in the field of biochemistry, computational and molecular biology within FP7 RegPot project Integra-Life.

February 2014 - Present

Head of Data Analysis/Research Scientist

Genos Ltd.
Hondlova 2/11, 10000 Zagreb, Croatia

Working as the Head of the Data Analysis department and Research Scientist on European projects MIMOmics and PainOmics.

September 2014 - Present

Lecturer

Department of Mathematics, Faculty of Science, University of Split
Teslina 12, 21000 Split, Croatia

Teaching courses: Mathematical Statistics, Stochastic processes, Probability theory.

February 2009 - January 2014

Teaching and Research Assistant

Department of Mathematics, Faculty of Science, University of Zagreb
Bijenička 30, 10000 Zagreb, Croatia

Teaching assistant in courses Computer Architecture, Stochastic processes, Computer Networks, Programing in C, Programing in C++, Probability models in Finance and a research associate in MireoWorld project (building a geo-aware search engine).

October 2005 - October 2007

IT Support

Department of Mathematics, Faculty of Science, University of Zagreb
Bijenička 30, 10000 Zagreb, Croatia

Support for students working on GNU/Linux, Windows and Unix operating systems.

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October 2005 - June 2006

Teaching Assistant

Department of Mathematics, Faculty of Science, University of Zagreb
Bijenička 30, 10000 Zagreb, Croatia

Courses: Applied Mathematics Lab I.

January 2004 - June 2005

System administrator at student dorm “Cvjetno Naselje”

Student Center
Savska cesta 25, 10000 Zagreb, Croatia

Support for students working in the computer lab and having network problems within the dorm. Computer lab manager.

October 2002 - June 2003

Basketball coach

Faculty of Science, University of Zagreb
Bijenička 30, 10000 Zagreb, Croatia

Basketball coach during Physical and health education courses.

FORMAL EDUACTION

2009-2014 Doctor of Philosophy (PhD), Mathematics and Statistics
Faculty of Science, Department of Mathematics
University of Zagreb, 10000 Zagreb, Croatia

2001-2008 Master of Science, Mathematical Statistics and Computer Science
Faculty of Science, Department of Mathematics
University of Zagreb, 10000 Zagreb, Croatia

1997-2001 Grammar school (“Marko Marulić”)
Split 21000, Croatia

PERSONAL SKILLS

Mother tongue(s) Croatian

English	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user
French	A2	Basic user	A2	Basic user	A2	Basic user	A2	Basic user	A2	Basic user

Driving licence B

COMPUTER RELATED SKILLS

Operating systems
– Microsoft Windows: basic administration and usage
– GNU/Linux: working with different GNU/Linux (mostly Debian and Gentoo) distributions since 2000. Administrating GNU/Linux based servers from 2002 (Apache, MySQL, PostgreSQL, Bind, OpenVPN, KVM, etc.).

Programming languages
At the moment I am primarily an R and Python user. However, I have a long history with programming in different languages like:
– R user from 2003. Worked on R base system, R packages,
– Python user from 2004. Worked on different projects using base packages, additional scientific packages and personally developed packages.
– C user from 1999. Developed libraries for internal use.
– C++ user from 2003. Developed libraries for internal use.
– PHP user from 2003. Developed libraries for both internal and global use (JaroWinkler library).
– Basic and PASCAL in elementary and high-school.
– other languages (like Haskell, JavaScript, etc.) for some small private projects and/or to teach myself new concepts.

Scientific software Matlab, Mathematica, R

Productivity software Open/Libre Office, Microsoft Office, LaTeX

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SOFTWARE PROJECTS

e-Ghetaldus http://baza.iugrina.com – Database of mathematical definitions in Croatian

JaroWinkler https://github.com/iugrina/jarowinkler – Jaro-Winkler string similarity implementation for PHP. Described (and referenced) in *"Expert PHP and MySQL: Application Design and Development"* by Marc Rochkind.

maline https://github.com/soarlab/maline – a free software Android malware detection framework

glycanR https://www.github.com/iugrina/glycanr – R package for N-glycan analysis – R core - personal contributions: https://stat.ethz.ch/R-manual/R-devel/library/stats/html/SignRank.html

R https://www.r-project.org/ – Developing and improving different aspects of the R language for internal (mostly personal) use. Sometimes, I push improvements to upstream (e.g. R core - https://stat.ethz.ch/R-manual/R-devel/library/stats/html/SignRank.html)

Other https://www.github.com/iugrina

SCIENTIFIC PROJECTS

Research Summer School in Statistical Omics http://school.statisticalomics.org/ – With the development of high-throughput molecular technologies in the recent years, the fields of biology, biomedicine, and agriculture become data-rich fields and, consequently, there is an increasing need for biologists trained in data analysis. The aim of this highly intensive Research Summer School and Workshop in Statistical Omics is training of a new generation of the Statistical Omics scientists who understand biology and technology behind the data and can apply modern methods to analysis of these data.

FP7 RegPot project Integra-Life http://integralife.bioinfo.hr/ – INTEGRA-LIFE aims to integrate research in five leading research groups in the field of biochemistry, computational and molecular biology at the University of Zagreb and network them with 17 prominent European research institutions.

FP7 project Pain-OMICS http://www.painomics.eu/ – Pain-Omics (Multi-dimensional omics approach to stratification of patients with low back pain) is a FP7 Innovation project funded by the European Commission, running from September 2013, coordinated by the Fondazione IRCCS Policlinico San Matteo.

FP7 project MIMOmics http://www.mimomics.eu/ – MIMOmics (Methods for Integrated analysis of multiple Omics datasets) is a FP7-HEALTH-2012 Innovation project funded by the European Commission, running from October 2012 till October 2017, coordinated by the Leiden University Medical Center.

MireoWorld Development of geo-aware web search engine in collaboration between Mireo and University of Zagreb. Working on string similarity metrics, web crawlers, machine/statistical learning algorithms. Both Research and Development.

OTHER PROJECTS

FSEC http://fsec.foi.hr/ – Contributing as a member of the organizing committee and occasional lecturer at FSEC, a vendor-neutral technical security symposium, hosted by the Faculty of Organization and Informatics, Varaždin, Croatia. The Symposium covers a broad area of information security topics including Defensive and offensive security and advanced methods, Forensics and anti-steganography methods, Application and Web security, Steganography and Covert channels, Cryptography and Cryptanalysis, Privacy and Anonymity.

Nothing Will Happen (NSND) http://www.nsnd.org/ – I am one of the organizers of NSND in Split from its first instance in 2008. Short description of the project (taken from the official website): "Nothing Will Happen" (NSND) is a group of people interested in hacker issues, free software, social activism in the digital sphere, perhaps best described as the aficionados of geek culture. NSND has been traditionally taking place in Moravice (winter), Split (summer), Belgrade (spring), and Ohrid. Events are organized spontaneously, by using highly participatory digital tools such as Wiki, but the working programme itself, which consists of lectures and workshops, is defined by all the participants together on the spot, during the morning sessions.

ORGANIZATIONS

Sustavi otvorenog koda (Open Source Systems) "Sustavi otovorenog koda" is a non-governmental organization (NGO) from Split, Croatia. It's primary purpose is to educate people about computers (primarly software) through the use of of Open Source Software. All members of the NGO are volunteers. (*member of the executive board; financial advisor; regular member*)

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Hackerspace “Mama” in Zagreb, Croatia — regular member of the skill sharing group

Hackerspace “SOK” in Split, Croatia — regular member of the skill sharing group

CONFERENCES AND WORKSHOPS

Invited Speaker

- *“Overview of Some Interesting Statistical Problems in Biochemical Analysis of Glycans”*, 19th European Young Statisticians Meeting (2015), Prague, The Czech Republic

- *“A few algorithms for generating Mann-Whitney/Wilcoxon distribution”*, 12th Young Statisticians Meeting (2007), Piran, Slovenija

Presenter (selected talks)

- *“Exploring the Stability of IgG and Plasma Glycosylation Within Healthy Individuals”*, 23rd INTERNATIONAL SYMPOSIUM ON GLYCOCONJUGATES (2015), Split, Croatia

- *“Searching for Semantically Correct Postal Addresses on the Croatian Web ”*, Central European Conference on Information and Intelligent Systems (2014), Faculty of Organization and Informatics, Varaždin, Croatia,

- *“Anonymized Information”*, FSEC 2014 (Vendor-neutral technical security symposium), Faculty of Organization and Informatics, Varaždin, Croatia,

- *“Data mining ”*, FSEC 2013 (Vendor-neutral technical security symposium), Faculty of Organization and Informatics, Varaždin, Croatia,

- *“Free Android”*, Croatian Linux Users’ Conference 2012, Zagreb, Croatia

- *“DIY: Paranoid”*, FSEC 2012 (Vendor-neutral technical security symposium), Faculty of Organization and Informatics, Varaždin, Croatia,

- *“TOR”*, FSEC 2011 (Vendor-neutral technical security symposium), Faculty of Organization and Informatics, Varaždin, Croatia,

Participant (selected conferences)

15th Young Statisticians Meeting (2010), Vorau, Austria

29th European Meeting of Statisticians (2013), Budapest, Hungary

World Wide Web (2012), Lyon, France

5th Croatian Mathematical Congress (2012), Rijeka, Croatia

13th Young Statisticians Meeting (2008), Balatonfured, Hungary

Croatian Quants Day 2012, Zagreb, Croatia

28th Chaos Communication Congress, Berlin, Germany

Croatian Quants Day 2011, Zagreb, Croatia

27th Chaos Communication Congress, Berlin, Germany

Croatian Quants Day 2010, Zagreb, Croatia

Croatian Quants Day 2009, Zagreb, Croatia

Statistical Learning and Data Mining (2009), Donau University, Krems, Austria

useR 2009, Rennes, France

PUBLICATIONS

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Journals

[5] Clara Barrios, Jonas Zierer, Ivan Gudelj, Jerko Štambuk, Ivo Ugrina, Eva Rodríguez, María José Soler, Tamara Pavić, Mirna Šimurina, Toma Keser, Maja Pučić-Baković, Massimo Mangino, Julio Pascual, Tim D. Spector, Gordan Lauc, and Cristina Menni. Glycosylation Profile of IgG in Moderate Kidney Dysfunction. *Journal of the American Society of Nephrology*, page ASN.2015010109, July 2015. ISSN 1046-6673, 1533-3450. doi: 10.1681/ASN.2015010109. URL http://jasn.asnjournals.org/content/early/2015/07/15/ASN.2015010109

[4] I. Trbojević Akmačić, I. Ugrina, J. Štambuk, I. Gudelj, F. Vučković, G. Lauc, and M. Pučić-Baković. High-throughput glycomics: Optimization of sample preparation. *Biochemistry (Moscow)*, 80(7):934–942, July 2015. ISSN 0006-2979, 1608-3040. doi: 10.1134/S0006297915070123. URL http://link.springer.com/article/10.1134/S0006297915070123

[3] Sanja Prijić, Ivo Ugrina, Boris Labar, Damir Nemet, Josip Batinić, Renata Zadro, Sunčica Ries, Koraljka Gjadrov-Kuvedžić, Sanja Davidović, and Drago Batinić. Prognostic significance of constitutive phosphatidylinositol 3-kinase/Akt and mitogen-activated protein kinase phosphorylation in acute myeloid leukemia. *Leukemia & Lymphoma*, 56(8):2281–2288, August 2015. ISSN 1042-8194. doi: 10.3109/10428194.2014.990012. URL http://dx.doi.org/10.3109/10428194.2014.990012

[2] Sanja Perković, Sandra Bašić-Kinda, Igor Aurer, Ivo Ugrina, Antica Duletić-Načinović, Dominik Lozić, and Drago Batinić. Multiparameter flow cytometry is necessary for detection, characterization and diagnostics of composite mature B-cell lymphoproliferative neoplasms. *International Journal of Hematology*, 98(5):589–596, November 2013. ISSN 0925-5710, 1865-3774. doi: 10.1007/s12185-013-1432-7. URL http://link.springer.com/article/10.1007/s12185-013-1432-7

[1] Drago Špoljarić and Ivo Ugrina. On Statistical Properties of Palindromes in DNA. *Communications in Statistics - Theory and Methods*, 42(7):1373–1385, 2013. ISSN 0361-0926. doi: 10.1080/03610926.2012.739253. URL http://www.tandfonline.com/doi/abs/10.1080/03610926.2012.739253

Conference papers

[2] Marko Dimjašević, Simone Atzeni, Ivo Ugrina, and Zvonimir Rakamaric. Evaluation of Android Malware Detection Based on System Calls. In *Proceedings of the 2016 ACM on International Workshop on Security And Privacy Analytics*, IWSPA '16, pages 1–8, New York, NY, USA, 2016. ACM. ISBN 978-1-4503-4077-9. doi: 10.1145/2875475.2875487. URL http://doi.acm.org/10.1145/2875475.2875487

[1] Ivo Ugrina and Mislav Žigo. Searching for Semantically Correct Postal Addresses on the Croatian Web. In *Central European Conference on Information and Intelligent Systems, CECIIS - 2014*, pages 276–283, September 2014. URL http://www.ceciis.foi.hr/app/public/conferences/1/papers2014/711.pdf

ADDITIONAL INFORMATION

Memberships

Free Software Foundation, Croatian Statistical Society, Open Source Systems (Croatian NGO), Hackerspace "MaMa" (Zagreb, Croatia), Hackerspace "SOK" (Split, Croatia)

Interests

Sports: particularly basketball, tennis and running. Love to travel and experience different cultures.

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