

CURRICULUM VITAE

Ivan Smirnov

update on 25.12.2021

ivan@ismirnov.eu

2020– Research fellow, Chair for Computational Social Sciences and Humanities, RWTH Aachen

2018–2020 Group Leader, Computational Social Science Group, HSE University, Moscow

We were using big data and machine learning to understand complex social and psychological phenomena. Our main research focus was on inequality and psychological well-being in the digital age.

Education

2018 Ph.D. (cum laude¹), Higher School of Economics, Moscow

Thesis: Students' differentiation by academic performance on a social networking site

2014 M.Sc. Interdisciplinary Approaches to Life Science, University of Paris

2009 Applied Mathematics and Computer Science, St. Petersburg State University

Specialist degree² with a specialization in mathematical statistics

Visiting Scholar

2020 ~~Stanford University~~ (approved Visiting Scholar appointment, canceled due to COVID-19 pandemic)

2019 Chair for Computational Social Sciences and Humanities, RWTH Aachen

2018 Complexity Science Hub, Vienna

Teaching Experience

2021/22 WS RWTH Aachen

Social Data Science

Master Project Major Social Data Science

2021 SS RWTH Aachen

Advanced Scientific Programming with Python

Social Networks

Bachelor Pro-Seminar Data, Algorithms & Society

Master Project Major Social Data Science

¹ In Russia, only one class of honors is used

² It is a 5-year degree equivalent to Master

student evaluation 1.5/5 (lower is better)³

2020/21 WS RWTH Aachen

Introduction to Scientific Programming with Python
Seminar Data, Algorithms & Society

2019/20 Higher School of Economics

Introduction to Computational Social Science
Big Data and Machine Learning in Educational Research

student evaluation 4.8/5 (higher is better), best course award (nomination "Expanding horizons")

2018/19 Higher School of Economics

Introduction to Educational Data Science
Introduction to Computational Social Science

2014 Paris Descartes University

Introduction to Statistics

2020– Study advisor for the Master program "Computational Social Systems" RWTH Aachen

Academic advisor

2021– M. Zubkova (Bachelor, HSE)

Understanding the gender pay gap in the online freelance marketplace

2021– C. Oprea (Master, RWTH)

Determining the impact of toxicity on Wikipedia's talk pages

2020– M. Bogdanov (Doctoral, HSE)

Predictive modeling in sociology: the role of new data, scope and limitations

Work Experience

Prior to academia, worked as a web developer and a technical leader at several startups. Also worked on various non-profit projects and was part of the Teach for Russia founding team.

Languages

English (professional working proficiency), French (DEL F B2), Russian (native), German (in progress)

Programming Languages

Daily use: Python. Worked in the past: R, MATLAB, JavaScript, PHP, C#

³ Due to low response rate caused by pandemic the average was possible to compute only for one course (Python)

Grants, Scholarships and Awards⁴

2022 Co-organizer, SICSS TU Graz-RWTH from TU GRAZ (€15,000)
2021 Co-organizer, SICSS HSE from SICSS Core Sponsors⁵ (\$6,450)
~~2020 Co-organizer, SICSS HSE from SICSS Core Sponsors (\$10,000) (canceled due to COVID-19)~~
2020 Russian Foundation for Basic Research grant №20-311-90056 as academic advisor of M. Bogdanov (~ \$16,000)
2019 PI, Russian Science Foundation grant №19-18-00271 (~ \$261,000)
2018 Co-PI, HSE University Basic Research Program grant №31 (~ \$47,000)
2016 Key Personnel, Russian Foundation for Basic Research grant №16-06-00916 (~ \$26,000)
2016 Institute of Education The Pioneers Award for the Digital Trace project
2014 Advanced Doctoral Program Scholarship, HSE University
2013 SCIRE Foundation Excellence Scholarship
2012 French Government Scholarship

Service

ICA regional conference on Computational Communication Research, 2022
Conference Advisory Committee, Program Committee

The Web Conference / WWW; ACM Transactions of Social Computing; PLOS One; Sage Open;
Frontiers in Psychology
Reviewer

Selected Conference Talks

IC2S2 – International Conference on Computational Social Science
2017, 2018, 2019, 2020, 2021

ICWSM – International AAAI Conference on Web and Social Media
2018, 2019

NetSci-X – International Conference on Network Science
2017, 2020

SocInfo – International Conference on Social Informatics
2017, 2019

AERA Conference on Educational Data Science
2020

⁴ Russian sums are converted to USD using exchange rates. That might be misleading given that Russian ruble is one of the most underappreciated currencies in the world and that research salaries are substantially lower than in the developed countries

⁵ Alfred P. Sloan Foundation, Russell Sage Foundation, Facebook, Social Science Research Council

Selected Publications

- Smirnov, I., Lemmerich, F., Strohmaier M. (2021) Quota-based debiasing can decrease representation of already underrepresented groups, *Royal Society Open Science* <https://doi.org/10.1098/rsos.210821>
- Dokuka S., Sivak, E., Smirnov, I. (2021) Core but not peripheral online social ties is a protective factor against depression: evidence from a nationally representative sample of young adults <https://arxiv.org/abs/2111.15070>
- Smirnov, I. (2020) Estimating educational outcomes from students' short texts on social media, *EPJ Data Science* <https://doi.org/10.1140/epjds/s13688-020-00245-8>
- Sivak, E. & Smirnov, I. (2020) Measuring Adolescents' Well-Being: Correspondence of Naïve Digital Traces to Survey Data In *International Conference on Social Informatics* https://doi.org/10.1007/978-3-030-60975-7_26
- Dokuka, S., Smirnov, I. (2020) High academic performance is associated with shorter sleep and later bedtimes for young adults <https://arxiv.org/abs/2005.07806>
- Smirnov, I. (2019) Schools are segregated by educational outcomes in the digital space, *PLOS One* <https://doi.org/10.1371/journal.pone.0217142>
- Sivak, E. & Smirnov, I. (2019) Parents mention sons more often than daughters on social media, *Proceedings of the National Academy of Sciences* <https://doi.org/10.1073/pnas.1804996116>
- Bochaver, A., Dokuka, S., Novikova, M., Sivak, E., Smirnov, I. (2019) Report on Well-being of children in the digital age (*non peer-reviewed*)
- Bochaver, A., Dokuka, S., Sivak, E., Smirnov, I. (2019) Internet Use and Depressive Symptoms in Adolescents: a Review. *Clinical Psychology and Special Education* <https://doi.org/10.17759/cpse.2019080301>
- Smirnov, I. (2018) Predicting PISA scores from students' digital traces. In *International AAAI Conference on Web and Social Media* <https://ojs.aaai.org/index.php/ICWSM/article/view/14996>
- Smirnov, I., & Thurner, S. (2017) Formation of homophily in academic performance: students change their friends rather than performance, *PLOS One* <https://doi.org/10.1371/journal.pone.0183473>
- Smirnov, I. (2017) The digital Flynn effect: complexity of posts on social media increases over time. In *International Conference on Social Informatics* https://doi.org/10.1007/978-3-319-67256-4_3
- Polivanova K., & Smirnov, I. (2017) What is in my profile? Understanding the interests of modern adolescents through VKontakte data, *Educational Studies* <https://doi.org/10.17323/1814-9545-2017-2-134-152>
- Smirnov, I. (2017) Identifying factors associated with the survival and success of grassroots educational innovations, In *Reforms and innovation in education* https://doi.org/10.1007/978-3-319-60246-2_6
- Smirnov, I., Sivak E., Kozmina Y. (2016) In search of lost profiles: the reliability of VKontakte data and its importance for educational research, *Educational Studies* <http://doi.org/10.17323/1814-9545-2016-4-106-122>

Interests

Computational social science, inequality, psychological well-being, education, data science, complex systems, AI, social change, The Economist, «Eugene Onegin»