

Ilya Markov
Curriculum Vitae

PERSONAL INFORMATION *Address:* Informatics Institute (IvI), University of Amsterdam (UvA), Science Park 904, 1098 XH, Amsterdam, Netherlands
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RESEARCH INTERESTS Web Search, User Models, Learning to Rank, Heterogeneous Information Access, Federated Search, Distributed Information Retrieval

RESEARCH EXPERIENCE AND EDUCATION *October 2018 – current:* Assistant professor, scientific director at AIRLab, Informatics Institute, University of Amsterdam (UvA), Amsterdam, Netherlands

September 2016 – current: Invited lecturer and researcher at the St. Petersburg Academic University (SPbAU) and Higher School of Economics (HSE), St. Petersburg, Russia

April 2014 – September 2018: Postdoctoral researcher at the Information and Language Processing Systems group (ILPS), Informatics Institute, University of Amsterdam (UvA), Amsterdam, Netherlands

October 2008 – January 2014: PhD student at the Information Retrieval Group, Faculty of Informatics, University of Lugano (USI), Lugano, Switzerland
Research Topic: Uncertainty in distributed information retrieval
Scientific Adviser: Prof. Fabio Crestani

October 2013 – January 2014: Research Internship at Yandex, Moscow, Russia
Research Topic: User behavior in aggregated search
Scientific Adviser: Dr. Pavel Serdyukov

June – August 2012: Internship at the University of Strathclyde and the University of Glasgow, Glasgow, UK
Research Topic: Risk-aware methods for distributed information retrieval
Scientific Advisers: Prof. Ian Ruthven, Department of Computer and Information Sciences, University of Strathclyde
Dr. Leif Azzopardi, School of Computing Science, University of Glasgow

July 2006 – October 2008: Researcher at the Information Management Research Group, Faculty of Mathematics and Mechanics, St. Petersburg State University, St. Petersburg, Russia
Research Topic: Adaptive fusion of multiple image features
Scientific Adviser: Prof. Boris Novikov

September 2001 – July 2006: BSc and MSc at the Faculty of Mathematics and Mechanics, St. Petersburg State University, St. Petersburg, Russia
Major: Computer Science and Software Engineering
Minor: Mathematics

STRENGTHS Information Retrieval, Data Science, Machine Learning, Artificial Intelligence, Statistics, Algorithms and Data Structures, Software Engineering

SUPERVISION

PhD co-supervision:

- Yifan Chen (UvA), Cold-start top-k recommendation
- Rolf Jagerman (UvA), Counterfactual learning and evaluation
- Chang Li (UvA), Large-scale dueling bandits algorithms
- Artem Grotov (UvA), Online learning to rank from implicit feedback
- Alexey Borisov (UvA & Yandex), Modeling user behavior in web search
- Yaser Norouzzadeh (UvA), User behavior in location search
- Anastasia Giachanou (USI), Opinion mining for distributed IR
- Shangsong Liang (UvA), Efficient data fusion

MSc supervision:

2018 Bram van den Akker (UvA), Haitam Benyahia (UvA), Enzo Blindow (UvA), Vladimir Isakov (UvA), Vadim Kleiman (SPbAU), Ekaterina Maljutina (SPbAU), Bram Oosterlee (UvA), Daniela Solis Morales (UvA), Sidney de Vries (UvA)

2017 Nout van Deijck (UvA), David Langerveld (UvA), Stepan Malkevich (SPbSU), Ilnur Shugaepov (SPbAU), Martijn Wardenaar (UvA)

2015 Simon Widler (UvA), Remi de Zoeten (UvA)

PhD committee:

- Maria-Hendrike Peetz (UvA), Time-aware online reputation analysis
- Alexey Borisov (UvA), On understanding, modeling and predicting user behavior in Web search

TEACHING

Course organizer and lecturer:

- *Autumn 2016–2018:* Information Retrieval, MSc, SPbAU/HSE (St. Petersburg, Russia), Computer Science program
- *Spring 2018:* Information Retrieval, MSc, UvA, Information Studies program
- *Spring 2015–2017:* Web Search, MSc, UvA, Information Studies program, student evaluation 8.25–8.7 out of 10
- *Autumn 2016:* Advanced Information Retrieval, MSc, UvA, Artificial Intelligence program

Conference tutorials:

- Click Models for Web Search, RuSSIR 2016
- Click Models for Web Search and their Applications to IR, WSDM 2016
- Click Models for Web Search and their Applications, AINL-ISMW 2015
- An Introduction to Click Models for Web Search, SIGIR 2015
- Advanced Click Models and their Applications to IR, SIGIR 2015
- Distributed Information Retrieval and Applications, ECIR 2013
- Distributed Information Retrieval, Yandex Summer School in Distributed Computing 2011
- Distributed Information Retrieval, RuSSIR 2010
- Distributed Information Retrieval, ECIR 2010

COMMUNITY SERVICE

PC chair: RuSSIR 2015

Co-organizer: Search Intent Mining task (IMine-2) at NTCIR-12

Senior PC member: ECIR 2019, ECIR 2017

PC member: SIGIR 2015–2018, SIGIR short 2011-2018, CIKM 2016–2018, WWW 2015–2018, ECIR 2015–2017, ICTIR 2015–2017, RuSSIR 2016–2018, HIA 2015–2016

Journal reviewer: TOIS, IP&M, IR Journal

OC member: RuSSIR 2015, RuSSIR 2011, SIGIR 2010

GRANTS AND SCHOLARSHIPS

- ELIAS support for tutorials at SIGIR 2015
- ELIAS support for RuSSIR 2015
- Early Postdoc.Mobility fellowship, Swiss National Science Foundation, 2014-2015
- COST Action IC1002, Short-Term Scientific Mission: University of Amsterdam (2013), University of Strathclyde and University of Glasgow (2012)
- COST Action IC0702, Short-Term Scientific Mission: Alexander Technological Educational Institute of Thessaloniki (2011), University of Glasgow (2010)
- Attendance support from SIGIR 2011, ESSIR 2009
- Intel Student Research Scholarship 2007-2008
- Russian Foundation for Basic Research Grant 07-07-00268a (partial support)
- Yandex Internet-Mathematics Grant 2007

OPEN-SOURCE SOFTWARE

- Python library of click models for web search “PyClick”, available at <https://github.com/markovi/PyClick>
- Java library of distributed retrieval techniques “LiDR”, available at <https://github.com/markovi/LiDR>

TECHNICAL SKILLS

Sun Certified Java 5.0 Programmer, L^AT_EX, Python, Lucene, Terrier, Lemur, Git, SVN, SQL

LANGUAGES

Russian – mother tongue, English – fluent, Italian – advanced

SELECTED PUBLICATIONS

A. Borisov, I. Markov, M. de Rijke, and P. Serdyukov. A context-aware time model for web search. In *Proceedings of ACM International Conference on Research and Development in Information Retrieval (SIGIR)*, pages 205–214, 2016.

A. Borisov, I. Markov, M. de Rijke, and P. Serdyukov. A neural click model for web search. In *Proceedings of International World Wide Web Conference (WWW)*, pages 531–541, 2016.

A. Chuklin, I. Markov, and M. de Rijke. Click Models for Web Search. *Synthesis Lectures on Information Concepts, Retrieval, and Services*. Morgan & Claypool Publishers, 2015.

I. Markov and F. Crestani. Theoretical, qualitative, and quantitative analyses of small-document approaches to resource selection. *ACM Transactions on Information Systems*, 32(2):9:1–9:37, 2014.

I. Markov, L. Azzopardi and F. Crestani. Reducing the Uncertainty in Resource Selection. In *Proceedings of European Conference on Information Retrieval (ECIR)*, Moscow, Russia, pages 507–519, 2013.

I. Markov, N. Vassilieva. Image Retrieval: Color and Texture Combining Based on Query-Image. In *Proceedings of International Conference on Image and Signal Processing (ICISP)*, Cherbourg-Octeville, France, pages 430–438, 2008.