

**Ilya Markov**  
**Curriculum Vitae**

**PERSONAL INFORMATION**     *Address:* Informatics Institute (IvI), University of Amsterdam (UvA), Science Park 904, 1098 XH, Amsterdam, Netherlands  
*Phone:* +31 20 525 67 31  
*E-mail:* i.markov@uva.nl  
*Homepage:* <https://staff.fnwi.uva.nl/i.markov>

**RESEARCH INTERESTS**     Web Search, User Models, Heterogeneous Information Access, Effectiveness Metrics, Federated Search, Distributed Information Retrieval

**EDUCATION AND RESEARCH EXPERIENCE**     *April 2014 – current:* Postdoctoral Researcher at the Information and Language Processing Systems group (ILPS), Informatics Institute, UvA, Amsterdam, Netherlands  
*Research Topic:* Modeling user interactions in web search

*October 2008 – January 2014:* PhD student at the Information Retrieval Group, Faculty of Informatics, 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, Statistics, Algorithms and Data Structures, Databases, Software Engineering

**COMMUNITY SERVICE**     *PC chair:* RuSSIR 2015

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

*PC member:* CIKM 2016, WWW 2016, RuSSIR 2016, HIA 2016, AIST 2016, SEIM 2016, SIGIR 2015, WWW 2015, ECIR 2015, ICTIR 2015, AIST 2015, AINL-ISMW

2015, HIA 2015, SIGIR Demos 2014, ECIR Tutorials 2014, SIGIR Short Papers 2013, SIGIR Posters 2012, SIGIR Posters 2011

*Journal reviewer:* TOIS, IP&M, IR Journal

*Reviewer:* WSDM 2016, WSDM 2015, WSDM 2013, TPD L 2013, IIR 2013, SAC 2013, WSDM 2012, SPIRE 2012, IIX 2012, SPIRE 2010, CIKM 2009

*OC member:* RuSSIR 2015, RuSSIR 2011, SIGIR 2010

## 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>

## SUPERVISION

*PhD co-supervision:*

- Alexey Borisov (UvA & Yandex), Modeling user behavior in web search using neural networks
- Nikos Voskarides (UvA), Explaining relations between entities
- Yaser Norouzzadeh (UvA), User behavior in location search
- Anastasia Giachanou (USI), Opinion mining for distributed IR
- Shangsong Liang (UvA), Efficient data fusion, graduation December 2014

*MSc supervision:*

- Rémi de Zoeten (UvA), Computational stylometry in adversarial settings, graduation July 2015
- Simon Widler (UvA), Automated and flexible error detection for mobile expense reporting, graduation on July 2015

*PhD committee:* Maria-Hendrike Peetz (UvA), Time-aware online reputation analysis, graduation March 2015

## TEACHING

*Course organizer and lecturer:*

- [upcoming] *September-December 2016:* Information Retrieval, MSc, Academic University and Computer Science Center (St. Petersburg, Russia), Computer Science program
- [upcoming] *November-December 2016:* Advanced Information Retrieval, MSc, UvA, Artificial Intelligence program
- *February-March 2016:* Web Search, MSc, UvA, Information Studies program, student evaluation 8.7 out of 10
- *February-March 2015:* Web Search, MSc, UvA, Information Studies program, student evaluation 8.25 out of 10

*Conference tutorials:*

- [upcoming] 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

*Teaching assistant:*

- *Autumn 2011-2012:* Information Retrieval, 3rd year BSc, USI, Faculty of Informatics.
- *Spring 2009-2011:* Theory of Computation, 3rd year BSc, USI, Faculty of Informatics.
- *Autumn 2009:* Web-Development, 2nd year BSc, USI, Faculty of Informatics.
- *Spring 2008:* Java Programming Language, 1st year BSc, St. Petersburg State University on Information Technologies, Mechanics and Optics.
- *Autumn 2007:* Database Management Systems, 1st year MSc, St. Petersburg State University.

**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

**SOFTWARE ENGINEERING EXPERIENCE**

*March 2007 – October 2008:* Software engineer and vice-technical leader at the St. Petersburg Branch of Motorola

Project: OCAP Digital TV set-top boxes, at least 100 engineers, about 3K Java classes, more than 1M LOC

Responsibilities: refactoring, feature implementation, code maintenance, unit-testing  
Technologies: Java, JUnit, Eclipse

*October 2004 – August 2006:* Database administrator and web-application developer at R&D Center Protei

Projects: commercial and internal projects, 5–10 engineers, 100–200 Java classes, at least 1K LOC

Responsibilities: design and implementation of database schemas, maintenance and replication of databases, web-application development

Technologies: Sybase, Oracle, SQL, Java, Eclipse

**TECHNICAL SKILLS**

Sun Certified Java 5.0 Programmer, L<sup>A</sup>T<sub>E</sub>X, Groovy, Python, Lucene, Terrier, Lemur, Eclipse, Git, SVN, Linux shell, 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.