

Eugene Kharitonov

Contact Details

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Education

2012–2016 **PhD Computer Science**, *The University of Glasgow*, UK.
2007–2009 **MSc Applied Math & Physics**, *Moscow Institute of Physics and Technology*, Russia.
2003–2007 **BSc Applied Math & Physics**, *Moscow Institute of Physics and Technology*, Russia.

PhD Thesis

Title *Using Interaction Data for Improving Offline and Online Evaluation of Search Engines*
Supervisors Dr. Iadh Ounis, Reader (Associate Professor), University of Glasgow
Dr. Pavel Serdyukov, Head of Research, Yandex
Dr. Craig Macdonald, Research Fellow, University of Glasgow
Description This thesis explores several possibilities to improve the search engine evaluation pipeline by explicitly or implicitly modelling the user behaviour. A particular attention is paid to improving the efficiency of the online evaluation techniques, such as interleaving and A/B testing.

Masters Thesis

Title *Link Graph Classification with Application to Adult Images Classification*
Supervisors Prof. Helen Bunina, Moscow State University
Dr. Ilya Muchnik, Rutgers University
The graph-based image classification algorithm I developed in my Master thesis still works as a part of the image classification pipeline at Yandex.

Experience

Yandex, LLC

2011–... **Researcher**, DEPARTMENT OF APPLIED RESEARCH.

I am working on applied research topics in web search evaluation, personalization, and user modelling. The results of my research are published results of our research in major Information Retrieval conferences, such as ACM SIGIR and ACM CIKM.

Some highlights:

- I am a co-organizer of the Yandex Internet Mathematics Challenge series, where I am responsible for the problem formulation, building the datasets, cleaning, preliminary analysis, implementing baselines, etc.
 - Web Search Personalization Challenge 2014, Kaggle, [link]
 - Web Search Engine Switching Detection 2013, [link]
 - Relevance Prediction Challenge 2012, [link]
- My paper on early stopping of online evaluation experiments received the **SIGIR 2015 Best Student paper award**.

2007–2011 **Software Engineer**, IMAGE SEARCH.

As an Engineer, I worked on numerous Machine Learning/Data Mining/Engineering tasks, related to image/web page classification, crawling, and ranking.

Some achievements:

- I was responsible for designing and implementing internet-scale adult content filter used in the image search service. The stages I worked on included:
 - Collecting datasets of images, pages, and queries used for learning and evaluation;
 - Designing a text-based web page classifier;
 - Building a link-graph based classification of the adult images;
 - Query classification
- Wallpaper detection, captcha filtering, crawling priority policy, etc

Netcracker, LLC

2006–2007 **Software Engineer**, SYSTEM PERFORMANCE GROUP.

System performance optimization (Java 2 EE, Oracle)

Teaching Experience

Moscow Institute of Physics and Technology

2011 Teaching Assistant, Operating Systems course

Awards

2015 ACM SIGIR Best Student Paper Award

2010 RuSSIR Best Student Paper (one of the three)

Additional Education

Yandex School of Data Analysis

2007–2011 Machine Learning, Algorithms, etc

Information Processing Center, MIPT

2005–2006 Networks and Software Development

Coursera

- Cryptography
- Game Theory
- An Introduction to Functional Analysis
- Linear and Discrete Optimization

Technical Skills

Programming Python data science stack:

- numpy/scipy,
- theano, autograd
- scikit-learn
- pandas
- C/C++, R

Other svn, git, latex

Community Service

PC Member CIKM 2015, AIST 2014, WSDM WSCD 2012-2014, ACL LAPS 2014

Publications

- Generalized Team Draft Interleaving, CIKM 2015. Kharitonov E., Macdonald C., Serdyukov P., Ounis I.
- Sequential Testing for Early Stopping of Online Experiments, SIGIR 2015, Kharitonov E., Macdonald C., Serdyukov P., Ounis I. (**Best Student Paper**)
- Optimised Scheduling of Online Experiments, SIGIR 2015, Kharitonov E., Macdonald C., Serdyukov P., Ounis I.
- Vertical-Aware Click Model-Based Effectiveness Metrics, CIKM 2014, Markov I., Kharitonov E., Nikulin V., Serdyukov P., de Rijke M., Crestani F.
- Improving offline and online web search evaluation by modelling the user behaviour. SIGIR 2014 DC, Kharitonov E.
- Intent models for contextualising and diversifying query suggestions, CIKM 2013, Kharitonov E., Macdonald C., Serdyukov P., Ounis I.
- Using historical click data to increase interleaving sensitivity, CIKM 2013, Kharitonov E., Macdonald C., Serdyukov P., Ounis I.
- Incorporating efficiency in evaluation, SIGIR 2013 MUBE Workshop, Kharitonov E., Macdonald C., Serdyukov P., Ounis I.

- User model-based metrics for offline query suggestion evaluation, SIGIR 2013, Kharitonov E., Macdonald C., Serdyukov P., Ounis I.
- Demographic context in web search re-ranking, CIKM 2012. Kharitonov E., Serdyukov P.
- Gender-aware re-ranking, SIGIR 2012. Kharitonov E., Serdyukov P.

Interests

- Learning new stuff
- Running
- Rock climbing