

## Education

2012 – 2013 **Yandex School of Data Analysis.**

2009 – 2014 **Master Degree in Mathematics and Mechanics**, *Moscow State University, Moscow, Russia*, GPA – 5.0 / 5.

## Work experience

August 2017 – **Yandex**, *Team Leader, Senior Software Engineer*, Advertising Services, Group of Autobudget.

- now
  - o The main focus is on supporting and improving backend of automatic bidder for Yandex Direct.
  - o Introducing new ideas and algorithms to be implemented in automatic bidder.
  - o Managing an organized work of the team.

July 2016 – **Yandex**, *Senior Software Engineer*, Advertising Services, Group of Projects Management.

August 2017

- o Help in coordination of department-spread projects.

June 2015 – **Yandex**, *Software Engineer*, Advertising Services, Group of Projects Management.

- July 2016
  - o The main task was to support automatic advertisement bidder, available for Yandex Direct users.
  - o Managing related projects in other groups.

September 2012 – **Yandex**, *Software Engineer*, Advertising Services, Group of Algorithms of Fraud Detection.

- June 2015
  - o Developing new fraud traffic filtration algorithms.
  - o Developing automatic Anomalies Detection system, which is able to notify users on anomalies in advertisement traffic.
  - o Integrating Anomalies Detection system with Anomalies Analyzer system, that is, anomalies in advertisement traffic, which are found by Anomalies Detection system, are passed to be analyzed to Anomalies Analyzer service.

July 2012 – **Yandex**, *Software Engineer Intern*, Advertising Services.

- September 2012
  - o Developing of backend of eventually consistent consensus system.
  - o Developing of Anomalies Analyzer service, which helps to find the reasoning slice of anomalies in advertisement traffic.

## Skills

Programming languages **C++ (proficiency), Python (proficiency), Perl (proficiency), R (proficiency), java (basic), scala (intermediate), JavaScript (with JQuery), html (proficiency), SQL(proficiency)** .

ML tools **Pandas, NumPy, SciPy, scikit-learn, matplotlib, Apache Spark, Vowpal Wabbit, word2vec.**

Other tools **linux, git, svn, deb packages, gdb, pdb, vim, flask, nginx, mongodb, mac os.**

Languages **Russian (native), English (proficiency).**

## Publications

May 2015 **Journal of Mathematical Sciences**, *Extension of Endomorphisms of the Subsemigroup  $GE_2 + (R)$  to Endomorphisms of  $GE_2 + (R[x])$ , Where  $R$  is a Partially-Ordered Commutative Ring Without Zero Divisors*, Volume 206, Issue 6, pp 711-733 <https://link.springer.com/article/10.1007%2Fs10958-015-2348-y>.

September 2014 **Journal of Mathematical Sciences**, *Endomorphisms of the Semigroup  $G_2(R)$  Over Partially Ordered Commutative Rings Without Zero Divisors and with  $1/2$* , Volume 201, Issue 4, pp 534-551 <https://link.springer.com/article/10.1007/s10958-014-2010-0>.

2013 **Fundamental and Applicable Mathematics**, *Extension of endomorphisms of the semigroup  $GE_2 + (R)$  to endomorphisms of  $GE_2 + (R[x])$  for the lattice-ordered commutative ring  $R$  with a unit and without zero divisors.*, no. 4, pp 155-184 <http://www.ams.org/mathscinet-getitem?mr=3431839>.

## Projects

2017 – now **RAST – a highly distributed database**, <https://github.com/olegtsts/RAST>, [https://github.com/olegtsts/parallel\\_programming](https://github.com/olegtsts/parallel_programming).

- o Project is in the designing state.
- o Involves methods of constructing fault-tolerant service.
- o Includes:
  - high-level multithreading technique
  - exception-safe design techniques
  - safe memory release techniques
- o See the example of code here [https://github.com/olegtsts/parallel\\_programming/blob/master/lock-free-queue-with-olegts-ref-counting.cpp](https://github.com/olegtsts/parallel_programming/blob/master/lock-free-queue-with-olegts-ref-counting.cpp)

2015–2016 **Graph Analyzer Utility**, *Mentoring project in Higher School of Economics*, <https://github.com/ilyshnikova/graph-analyzer>.

- o Server-based program, which accepts time series points and detects anomalies on data series.
- o Works online with complexity  $O(1)$  on point submission.
- o Includes human html interface for controlling algorithms, which work on time series.
- o Source code: <https://github.com/ilyshnikova/graph-analyzer>

Git repository: <https://github.com/olegtsts/>

## Olympiads

- 2011 **International Mathematics Competition for University Students**, Prize winner (third prize).
- 2011 **Students Olympiad of Higher Algebra**, Prize winner (second prize).
- 2010 **Students Olympiad of Higher Algebra**, Prize winner (third prize).
- April 2009 **All-Russian Olympiad of Mathematics**, Prize winner (second prize).
- April 2009 **Moscow State Olympiad of Mathematics**, Prize winner (first prize).
- July 2008, July 2007, July 2006 **Geometrical Olympiad in Honor of I.F.Sharygin**, Prize winner (first prize), three times.
- April 2008 **All-Russian Olympiad of Mathematics**, Prize winner (first prize).
- March 2008 **Moscow State Olympiad of Mathematics**, Prize winner (third prize).
- April 2007 **All-Russian Olympiad of Mathematics**, Prize winner (second prize).
- April 2006 **All-Russian Olympiad of Mathematics**, Prize winner (third prize).
- March 2006 **Moscow State Olympiad of Mathematics**, Prize winner (second prize).