

# Aleksandr Avdiushenko

Saint-Petersburg, Russia • ovalur@gmail.com ☎ +7 913 718 53 78 ✉ ovalur

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## Work experience

2019 — present	<b>Saint Petersburg State University, Department of Mathematics and Computer Science, Associate Professor</b> <ul style="list-style-type: none"><li>• 2019 — in cooperation with Yandex, launched the bachelor's program in Mathematics, Algorithms and Data Analysis</li></ul>
2013 — present	<b>Yandex, CS center/School of Data Science, Academic Programs Manager</b> <ul style="list-style-type: none"><li>• 2013 — launched a branch Yandex Data School in Novosibirsk. From 2016 to 2018 a total of 16 graduates</li><li>• 2017 — in cooperation with JetBrains, expanded the Yandex Data School branch to Computer science center</li></ul>
2015 — 2018	<b>Yandex.Sprav, analyst</b> <ul style="list-style-type: none"><li>• implemented a daily calculation of the attribute-metrics (publicity, name, address, working time...) of accuracy of the Yandex organizations database</li><li>• automated and optimized data update processes in call centers and in Yandex.Toloka. In particular improved the effectiveness of updating by 20%, using catboost to predict the likelihood of closing an organization</li><li>• two times increased the accuracy of the organizations database by 2% and 3%, highlighting the largest problems from the losses and correcting them. Firstly, fixed companies with inaccessible phones. Secondly, increased the accuracy of the time of work of organizations by their priority updating</li></ul>
2009 — 2015	<b>Institute of Computational Technologies SB RAS, graduate student, researcher</b> <ul style="list-style-type: none"><li>• generalized to non-stationary geometry the method of solving the three-dimensional Reynolds equations of motion of an incompressible fluid</li><li>• accelerated calculations by 16 times, parallelizing the algorithm across blocks of the computational domain using MPI for processes with distributed memory (improvement of the Fortran software package available in the laboratory, ~ 30 thousand lines of code)</li><li>• accelerated another 7 times, parallelizing the algorithm in one block using OpenMP-threads with shared memory</li><li>• published 19 scientific papers (4 articles, 13 theses, 2 patents), eventually defending a PhD thesis «New numerical models of hydrodynamics of turbomachines » (in Russian)</li></ul>
2008 — 2014	Specialized Educational and Scientific Center NSU, math teacher
2006 — 2017	organizer and member of the Jury of Mathematical Olympiads: All-Russian, All-Siberian, Tournament of cities
2010 — 2013	math club «Sovenok», organizer and teacher

## Skills

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| • Python (numpy, scikit-learn, matplotlib) | • machine learning (catboost, SVM, RF)                     |
| • Java (spring, hibernate, immutables)     | • algorithms, data structures                              |
| • linux, git, ipython notebook             | • math statistics, analysis, algebra                       |
| • SQL, MapReduce, MPI, OpenMP              | • Russian: native, English: intermediate, French: débutant |

## Education

2013 — 2016	School of Data Science, Yandex	programming, machine learning	graduate
2009 — 2014	Graduate School of ICT SB RAS	math modeling, numerical methods	PhD
2003 — 2009	NSU, Department of Mechanics and Mathematics	math	master