



# Dmitry Efimov

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[diefimov@gmail.com](mailto:diefimov@gmail.com)

Win when nobody believes and do that nobody expects

## EDUCATION

### MOSCOW STATE UNIVERSITY

PHD IN MATHEMATICS  
Jan 2008 | Moscow, Russia

### MSc IN MATHEMATICS

June 2004 | Moscow, Russia  
College of Mechanics and Mathematics  
Degree with Honour

## LINKS

[Github repo](#)  
[LinkedIn profile](#)  
[Kaggle profile](#)  
[Google Scholar profile](#)

## SKILLS

### PROGRAMMING

Over 10000 lines:  
Python • Scala • R •  $\LaTeX$   
Over 2000 lines:  
C/C++ • SQL • JavaScript • Matlab  
Familiar:  
Julia • Octave • Java • SAS

## SOCIETIES

Since 2012:  
Kaggle Community  
(Kaggle Grandmaster)  
Since 2012:  
American Mathematical Society

## EXPERIENCE

### AMERICAN EXPRESS | DIRECTOR - MACHINE LEARNING

Aug 2018 – present | New York, USA | Feb 2017 – July 2018 | London, UK

Completed projects:

- segmentation approach for different use cases
- improving fraud modelling
- feature selection for fraud detection
- dynamic approach for credit line modeling

### AMERICAN UNIVERSITY OF SHARJAH | ASSISTANT PROFESSOR

September 2012 – June 2017 | Sharjah, UAE

- research in the area of applied data mining and machine learning (**algorithms ensembling, feature engineering, feature selection**)
- winner of several data mining competitions on Kaggle
- completed several projects in Bioinformatics
- US patent: Method and system for forecasting future events (patent number: 9639807)
- developed new courses “Applied data mining: theory and applications” and “Introduction to mathematical programming”

### MOSCOW STATE UNIVERSITY | ASSISTANT PROFESSOR

September 2008 – Aug 2012 | Moscow, Russia

- research in the area of Functional and Complex Analysis
- several publications in the leading mathematical journals
- the results are summarized in the book  
**Valerian Gavrilov, Alexey Subbotin and Dmitry Efimov. Boundary properties of analytic functions (further contribution). Moscow University Press, 2013**

### MOSCOW STATE UNIVERSITY | INSTRUCTOR

September 2007 – Aug 2008 | Moscow, Russia

## AWARDS / GRANTS

2016	3 <sup>rd</sup> /5123	Santander Customer Satisfaction contest
2016	2 <sup>nd</sup> /40	Cervical Cancer Screening contest
2015	3 <sup>rd</sup> /59	Western Australia Rental Prices, Deloitte
2015	3 <sup>rd</sup> /414	Avito Context Ad Clicks Challenge
2015	2 <sup>nd</sup> /1306	West Nile Virus Prediction
2014	grant	General Electric Research Grant
2014	1 <sup>st</sup> /44	Risky Business Challenge, American Express
2013	2 <sup>nd</sup> /37	As the World Churns contest, Deloitte
2013	3 <sup>rd</sup> /1687	Employee Access Challenge, Amazon
2013	2 <sup>nd</sup> /553	KDD Cup: Author-Paper Identification
2013	4 <sup>th</sup> /237	KDD Cup: Author Disambiguation Challenge
2012	2 <sup>nd</sup> /12	Predicting the Strength of Social Ties contest
2009	grant	MSU award for talented young researchers
2006	grant	Scholarship of the President of Russian Federation for leading scientific schools

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## BOOKS AND CHAPTERS

- Dmitry Efimov. Encyclopedia of Social Network Analysis and Mining, edited by Jon Rokne and Reda Alhajj, chapter “Independent Component Analysis”, Springer-Verlag New York (2014): 724-728
- Valerian Gavrilov, Alexey Subbotin and Dmitry Efimov. Boundary properties of analytic functions (further contribution). Moscow, Russia: Moscow University Press, 2013

## PUBLICATIONS IN JOURNALS

- Efimov Dmitry. Click-Through Rate Prediction - Top-5 Solution For The Avazu Contest, *Mathematica Montisnigri*, vol. XXXII (2015): 158-171.
- Berengueres Jose, and Efimov Dmitry. Airline new customer tier level forecasting for real-time resource allocation of a miles program. *Journal of Big Data* 1, no. 06 (2014): 1-3. DOI: 10.1186/2196-1115-1-3.
- Efimov D.A. and Nikulin V.N. Prediction of a biological response of molecules from their chemical properties. *Advanced Science*, 2(2), 2013: 107-123 (in Russian).
- Zaki Nazar, Efimov Dmitry and Berengueres Jose. Protein complex detection using interaction reliability assessment and weighted clustering coefficient. *BMC Bioinformatics*, vol. 14 (2013): 163. DOI: 10.1186/1471-2105-14-163.
- Zaki Nazar, Berengueres Jose and Efimov Dmitry. Detection of protein complexes using a protein ranking algorithm. *Proteins: Structure, Function, and Bioinformatics*, 80, no. 10 (2012): 2459-2468. ISSN: 1097-0134.
- Efimov Dmitry. Structural properties of holomorphic functions classes in a half plane. *Mathematical Notes*, 83, no. 5 (2009): 661-666.
- Efimov Dmitry. Criteria of limited and completely bounded sets in F-algebras of holomorphic functions defined by maximal functions. *Moscow University Mathematics Bulletin*, 1, no. 2 (2008): 23-28. ISSN: 0027-1322.
- Efimov Dmitry. F-algebras of holomorphic functions in a half-plane defined by maximal functions. *Doklady Mathematics*, 416, no. 6 (2007): 732-734. ISSN: 1064-5624.
- Efimov Dmitry and Subbotin Alexey. Some F-algebras of holomorphic functions in a half-plane. *Mathematica Montisnigri*, XVI, no. 2 (2003): 69-81.

## CONFERENCE PRESENTATIONS AND PROCEEDINGS

- Efimov Dmitry and Sulieman Hana. Sobol sensitivity for machine learning. Springer Proceedings of Mathematics & Statistics: special volume of the AUS-ICMS'15
- Efimov Dmitry. Click-Through Rate Prediction - TOP-5 solution for the Avazu contest. Paper presented at the 13th International seminar “Mathematical models and modeling in laser plasma processes and advanced science technologies”, Petrovac, Montenegro, June 1-6, 2015
- Efimov Dmitry, Silva Lucas and Solecki Benjamin. KDD Cup 2013 - Author-Paper Identification Challenge: Second Place Team. Paper presented at the 19th ACM SIGKDD, KDD Cup Workshop, Chicago, Illinois USA, August 11-14, 2013
- Solecki Benjamin, Silva Lucas and Efimov Dmitry. KDD Cup 2013 - Author Disambiguation. Paper presented at the 19th ACM SIGKDD, KDD Cup Workshop, Chicago, Illinois USA, August 11-14, 2013
- Efimov Dmitry, Zaki Nazar, and Berengueres Jose. Detecting Protein Complexes from Noisy Protein Interaction Data. Paper presented at the 18th ACM SIGKDD, BioKDD, Beijing, China, August 12-16, 2012
- Zaki Nazar, Berengueres Jose, and Dmitry Efimov. ProRank: A Method for Detecting Protein Complexes. Paper presented at the 14th international conference on Genetic and evolutionary computation conference (GECCO'12), pp: 209-216, Philadelphia, Pennsylvania, USA, July 7-11, 2012
- 2nd Baltic Autumn School, Workshop on Systems Biology, Lubeck, Germany, September, 2011
- International conference “Metric geometry of surfaces and polyhedra”, dedicated to 100th anniversary of N.V.Efimov. Moscow, Russia, August, 2010
- V international workshop “Fourier series and applications”. Novorossiysk, Russia, May, 2008
- Conference “Lomonosov readings from-2007”. Moscow, Russia, April, 2007
- 13th Saratov conference “The modern issues of functional theory and applications”. Saratov, Russia, January, 2006
- 24th conference of young scientists. Moscow State University, Russia, April, 2002