Michael Figurnov (Михаил Фигурнов)

E-mail: michael@figurnov.ru   Website: https://figurnov.ru/

I am a Staff Research Scientist at DeepMind in London, UK. My research interests include deep learning, Bayesian methods, and machine learning for biology. I have worked on AlphaFold which has been recognized as the solution to the protein folding problem.

Employment history

DeepMind, London, UK
Staff Research Scientist	2021-present
Senior Research Scientist	2019-2021
Research Scientist	2018-2019

Higher School of Economics, Moscow, Russia
Research Fellow	2017

Lamoda.ru, Moscow, Russia
R&D engineer (part-time)	2013-2014

Ozon.ru, Moscow, Russia
Data Mining Researcher (part-time)	2011-2013

Education

Bayesian Methods Research Group / Higher School Of Economics, Moscow, Russia
PhD in Computer Science   2013-2019
Topic: Probabilistic method of adaptive computation in neural networks
Supervised by Dmitry Vetrov

Lomonosov Moscow State University, Moscow, Russia
Specialist (≈Master of Science) in Applied Mathematics and Computer Science   2008-2013
GPA 4.9/5.0, graduated with honours

Internships and research visits

Google Seattle, USA
Software Engineering Intern, hosted by Li Zhang   July - Oct 2016
University of Toronto, Canada
Visiting student, hosted by Ruslan Salakhutdinov   Sep - Dec 2015
Microsoft Research Cambridge, UK
Visiting student, hosted by Pushmeet Kohli   Sep - Oct 2014

Selected publications

Please see https://scholar.google.com/citations?user=qd0tOpQAAAAJ for a full list of publications.

2021   John Jumper*, Richard Evans*, Alexander Pritzel*, Tim Green*, **Michael Figurnov***, Olaf Ronneberger*, Kathryn Tunyasuvunakool*, Russ Bates*, Augustin Žídek*, Anna Potapenko*, Alex Bridgland*, Clemens Meyer*, Simon A. A. Kohl*, Andrew J. Ballard*, Andrew Cowie*, Bernardino Romera-Paredes*, Stanislav Nikolov*, Rishub Jain*, Jonas Adler, Trevor Back, Stig Petersen, David Reiman, Ellen Clancy, Michal Zielinski, Martin Steinegger, Michalina Pacholska, Tamas Berghammer, Sebastian Bodenstein, David Silver, Oriol Vinyals, Andrew W. Senior, Koray Kavukcuoglu, Pushmeet Kohli, Demis Hassabis* "Highly accurate protein structure prediction with AlphaFold." Nature, 2021

2020   Shakir Mohamed*, Mihaela Rosca*, **Michael Figurnov***, Andriy Mnih* "Monte Carlo Gradient Estimation in Machine Learning." JMLR, 2020

2018   **Michael Figurnov,** Shakir Mohamed, Andriy Mnih "Implicit reparameterization gradients." NeurIPS (spotlight presentation), 2018

2017   **Michael Figurnov,** Maxwell D. Collins, Yukun Zhu, Li Zhang, Jonathan Huang, Dmitry Vetrov, Ruslan Salakhutdinov. "Spatially Adaptive Computation Time for Residual Networks." CVPR 2017

2016   **Michael Figurnov**, Aijan Ibraimova, Dmitry Vetrov and Pushmeet Kohli. "PerforatedCNNs: Acceleration through Elimination of Redundant Convolutions." NeurIPS 2016

Administrative duties

- Co-organizer of the Bayesian methods of machine learning weekly seminar (jointly with Dmitry Vetrov, Dmitry Kropotov), 2013-2017

Awards

- 3rd place award, Intel ISEF (worldwide scientific projects competition for high school students), 2008
- 2nd place (out of 85), Relevance Prediction Challenge, Yandex, 2011

Teaching experience

- Teaching assistant, **Bayesian Methods of Machine Learning** and **Graphical Models** courses, Skoltech, Moscow State University, and Yandex's School of Data Analysis, 2014-2015
- Lead instructor, **Machine Learning practical classes**, Moscow State University, September 2014 – May 2015

Languages

- English (fluent)
- Russian (native)