Roman Pogodin, CV

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github: https://github.com/romanpogodin

Education

2017 – MPhil/PhD Theoretical Neuroscience present University College London, London (UK)

Gatsby Computational Neuroscience Unit

2013 – BSc Applied Mathematics and Physics (Honours)

2017 Moscow Institute of Physics and Technology (State University), Moscow (Russia)

Department of Control and Applied Mathematics

Average Grade: 8.8/10

Research experience

April 2018 – Gatsby Unit, UCL, research group of Prof. Latham

present PhD student

Topic: associative memory models

November 2018 – Google DeepMind, collaboration with Tor Lattimore

February 2019 Breadth rotation student

Topic: adaptivity in adversarial bandits

September 2016 – Skoltech, research group of Prof. Maximov August 2017 Research intern at Center for Energy Systems

Topic: non-convex optimization

July 2016 – Summer Research Program, EPFL, Prof. Gerstner's lab

August 2016 Summer intern in Computational Neuroscience

Topic: generating long-time sequences from structured neural networks

January 2016 – MIPT, under the guidance of Dr. Grudinin

July 2016 Course project

Topic: optimization in application to structural biology

July 2015 – Amgen Scholars Program, LMU Munich, Prof. Leibold's lab

September 2015 Summer intern in Computational Neuroscience

Topic: simulation models of path planning in the hippocampal-cortical network

Teaching

September 2018 – Gatsby Unit, UCL March 2019 *Teaching assistant*

Probabilistic and Unsupervised Learning (COMPGI18)

Approximate Inference and Learning in Probabilistic Models (COMPGI16)

Systems and Theoretical Neuroscience

Responsibilities:

tutorials, marking, coordination of the Gatsby TAs, some assignments for neuroscience

Other

September 2016 – Yandex School of Data Analysis, Moscow (Russia)

June 2017 Department of Computer Science

Master's-level courses in computer science and data analysis

September 2016 – MIPT office for international internships March 2017 Team member

idion 2017 icam member

Data collection and work with students

February 2014 – MIPT volunteering team

June 2015 Group leader

Work with an orphanage

Skills

Programming

C, C++ (algorithms, course and research projects)

Python (data analysis, TensorFlow, PyTorch, research projects)

Matlab (numerical optimization)

Other

Linux-based OS, LATEX, Mathematica

Languages

English C1 (Advanced, TOEFL iBT score 103)

Russian C2 (Native Speaker)

Papers Google Scholar link

July 2019 On First-Order Bounds, Variance and Gap-Dependent Bounds for Adversarial Bandits

R. Pogodin, T. Lattimore

In Proceedings of the Conference on Uncertainty in Artificial Intelligence (UAI) 2019

October 2017 Efficient rank minimization to tighten semidefinite programming

for unconstrained binary quadratic optimization

R. Pogodin, M. Krechetov, Y. Maximov

In Proceedings of the 55th Annual Allerton Conference on Communication,

Control, and Computing (Allerton)

September 2016 Quadratic Programming Approach to Fit Protein Complexes into Electron Density Maps

R. Pogodin, A. Katrutsa, S. Grudinin

In Proceedings of Information Technologies and Systems 2016

Workshop papers

December 2019 Working memory facilitates reward-modulated Hebbian learning in

recurrent neural networks

R. Pogodin, D. Corneil, A. Seeholzer, J. Heng, W. Gerstner

Accepted to NeurIPS 2019 workshop

Real Neurons & Hidden Units: future directions at the intersection of neuroscience and Al

Talks

November 2019 DeepMind/UCL PhD Workshop

Title: Associative memory in winner-take-all networks: from binary units to spikes

Posters

September 2019 NCCD 2019

Title: Associative memory in winner-take-all networks:

from binary units to spikes (with Peter Latham)

March 2019 COSYNE 2019

Title: Memories in coupled winner-take-all networks (with Peter Latham)

June 2017 Ninth Traditional school "Control, Information, Optimization"

September 2016 Information Technologies and Systems 2016

August 2016 Summer Research Program, EPFL

June 2016 Eighth Traditional school "Control, Information, Optimization"

November 2015 58th MIPT Scientific Conference

September 2015 Amgen Program Cambridge symposium

August 2015 Amgen Program LMU symposium

Honors and awards

September 2016 – Increased State Academic Scholarship for research achievements December 2016

February 2014 – Abramov fund scholarship for best non-senior students

June 2016