Mariia Vladimirova

Education

2018-present Ph.D. in Applied Mathematics, Inria Grenoble Rhône-Alpes & University Grenoble-Alpes, France, Supervisors: Julyan Arbel, Jakob Verbeek.

Bayesian analysis of deep learning: methodology and theory

2017-2019 Msc. in Applied Mathematics, Moscow Institute of Physics and Technology, Russia.

Department of Control and Applied Mathematics.

GPA: 5.0/5.0 (8.7/10), ranking top - 10%

2017–2018 Msc. in Industial and Applied Mathematics, Grenoble Institute of Technology, France.

École Ensimag.

GPA: 15.2/20, ranking top - 10%

2013-2017 Bsc. in Applied Mathematics and Physics, Moscow Institute of Physics and Technology, Russia.

Department of Control and Applied Mathematics, with honors.

GPA: 4.9/5.0 (8.7/10), ranking top -10%

Work experience

January–July 2018 Internship, Inria Grenoble - Rhône-Alpes, Mistis team with Julyan Arbel, Pablo Mesejo.

Distributional properties of Bayesian deep neural networks

September 2016- Research project, Moscow Institute of Physics and Technology, with Prof. Vadim Strijov.

January 2017 Multitask regression in time series forecasting, granted, published

January-July 2016 Research project, Moscow Institute of Physics and Technology, with Prof. Vadim Strijov.

Multitask classification for ligand receptor bindings, granted, published

Papers

Preprints

2019 **Vladimirova M.**, Arbel J. Sub-Weibull distributions: generalizing sub-Gaussian and sub-Exponential properties to heavier-tailed distributions, arXiv preprint: 1905.04955, 2019, [arXiv text].

Conference publications

- **Vladimirova M.**, Arbel J., Mesejo-Santiago, P. Understanding priors in Bayesian neural networks at the unit level, **International Conference on Machine Learning**, 2019, [arXiv text].
- 2017 **Vladimirova M.**, Isachenko R., Strijov V. Dimensionality reduction for time series decoding and forecasting problems, **DesTech Proceedings**, 2018, [text].
- Vladimirova M., Popova M. Bagging of Neural Networks in Multitask Classification of Biological Activity for Nuclear Receptors (in russian), **Journal of Machine Learning and Data Analysis**, 2(3):349-363, 2016. A model to predict whether the ligand binds to a specific nuclear receptor.

Workshops

2018 **Vladimirova M.**, Arbel J., Mesejo-Santiago, P. Bayesian neural networks become heavier-tailed with depth, **NeurIPS Bayesian Deep Learning workshop**, 2018, [text].

Vladimirova M., Arbel J., Mesejo-Santiago, P. Bayesian neural network priors at the level of units, **Advances** in **Approximate Bayesian Inference symposium**, co-located with NeurIPS conference, 2018, [text].

Conferences and Seminars

3-5 October 2019 PAISS: Al Summer School, Paris, France, poster.

4 July 2019 Machine Learning Reading Group, Grenoble, France, invited talk.

23-28 June 2019 BNP'12 Conference, Oxford, UK, poster with best poster award.

9-14 June 2019 ICML'19 Conference, Long Beach, USA, poster.

3-6 June 2019 **Science Week**, *Grenoble*, *France*, poster.

15-17 May 2019 CASI'19 Conference, Dublin, Ireland, contributed talk.

4-5 April 2019 Statlearn'19 Workshop, Grenoble, France, poster.

19-22 March 2019 YES X: Understanding Deep Learning Workshop, Eindhoven, Netherlands, contributed talk, [slides].

14 March 2019 PhD Student Seminar, Grenoble, France, invited talk.

22-26 October 2018 Masterclass in Bayesian Statistics, CIRM Marseille Luminy, France, research school.

8-12 October 2018 12th Intelligent Data Processing Conference, Gaeta, Italy, contributed talk.

21-26 November 2016 59th MIPT Scientific Conference, Moscow, Russia, contributed talk.

10-14 October 2016 11th Intelligent Data Processing Conference, Barcelona, Spain, contributed talk.

Reviewing

Conference

International Conference on Learning Representations 2020

Workshops Bayesian Deep Learning NeurIPS Workshop 2019

Symposium on Advances in Approximate Bayesian Inference 2019

Awards and Honors

2019 CNRS Mobility Project Grant, €1500.

2019 IDEX Project Grant, €3200.

2019 BNP 2019 Best Poster Award.

2019 YES X: Understanding Deep Learning Workshop, travel support.

2018 Masterclass in Bayesian Statistics, travel support.

2017–2018 **IDEX Master Scholarship**.

2016–2017 **High Government Academic Scholarship**, for scientific achievements.

Distributed every semester among top-10% students (4-6 year) of the russian university

2016-2017 Russian Foundation for Basic Research Grant.

16-37-00488 Algorithms for constructing neural networks as a superposition of universal models

2014–2015 **Abramov Fund Scholarship**, for learning progress and achievements.

Distributed every semester among top-10% students (1-3 year) of MIPT

2013 2nd prize at MIPT Mathematics Olympiad, 3rd prize at MIPT Physics Olympiad.

Skills

Scientific: Bayesian statistics, neural networks, optimization

Computer: Python (including data science, neural networks specific and optimization libraries), R, Matlab,

LATEX, Transact-SQL

Languages: Russian (native), English (fluent), French (B2), German (A2)

Activities

Communication skills: numerous science olympiads organiser, member of a student committee

Music: piano (music school diploma with honors), ukulele

Sport: darts (MIPT team ex-member), soccer (MIPT women team ex-member), hiking, running, table

tennis