

Dmitry P. Vetrov

Born 1981, Aug 17

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Head of Bayesian Methods Research Group (30 persons) based on the Faculty of Computer Science at National Research University Higher School of Economics and the Faculty of Computational Mathematics and Cybernetics at Moscow State University, <https://cs.hse.ru/en/bayesgroup>

Education

PhD, Moscow State University, Faculty of Computational Mathematics and Cybernetics, 2006

MSc, Moscow State University, Faculty of Computational Mathematics and Cybernetics, 2003

Positions

2017-present, head of the International Laboratory of Deep Learning and Bayesian Methods

2016-present, National Research University Higher School of Economics, Faculty of Computer Sciences, research professor

2016-present, Yandex, leading researcher (part time)

2015-2016, Skoltech, associate professor

2014-2016, National Research University Higher School of Economics, Faculty of Computer Sciences, associate professor (part time)

2014-2015, Moscow State University, Faculty of Computational Mathematics and Cybernetics, associate professor

2011-2014, Moscow State University, Faculty of Computational Mathematics and Cybernetics, assistant professor

2010-2012, Kurchatov Institute, NBIC center, head of laboratory (part time)

2007-2011, Moscow State University, Faculty of Computational Mathematics and Cybernetics, researcher

Summer 2005, 2006, University of Wales, Bangor, intern

2000-2007, Dorodnicyn Computer center of Russian Academy of Sciences, technical assistant (part time)

Area of Research

Bayesian regularization of machine learning algorithms

Structured output learning

Probabilistic graphical models

Computer vision

Teaching Experience

Designed courses on Bayesian methods of machine learning and on graphical models. Currently teaching them in National Research University Higher School of Economics, Moscow State University and in Yandex School of Data Analysis.

Lecturer on machine learning for software engineers (2009-2011), mathematical methods of forecasting (2008-2009). Served as TA on courses on applied algebra (2013-2015), machine learning for software engineers (2012-2015).

Research Projects

Participated in several research projects on the development of new machine learning and probabilistic inference methods and in interdisciplinary research (cognitive sciences, medical data processing, non-organic chemistry, etc.). Brief description of recent projects can be seen here <https://cs.hse.ru/en/bayesgroup/projects>

Awards

2015-2016, 2013-2014, Grant of Russian Foundation for Basic Research for best research groups led by young scientists

2012-2014, President's scholarship for leading young scientists

2012, Gold medal of Russian branch of European Academy for the set of papers on inference in graphical models and Bayesian regularization

2008-2009, 2010-2011, President's grant for young PhDs

Papers

Author of more than 140 papers, including 83 in English

Main Papers:

D. Molchanov, A. Ashukha, D. Vetrov. Variational Dropout Sparsifies Deep Neural Networks. International Conference on Machine Learning (ICML) 2017 (rank A*)

M. Figurnov, M. Collins, Yukun Zhu, Li Zhang, Jonathan Huang, D. Vetrov, R. Salakhutdinov. Spatially Adaptive Computation Time for Residual Networks. Conference on Computer Vision and Pattern Recognition (CVPR) 2017 (rank A)

K. Neklyudov, D. Molchanov, A. Ashukha, D. Vetrov. Structured Bayesian Pruning via Log-Normal Multiplicative Noise. In Advances in Neural Information Processing Systems (NIPS) 2017 (rank A*)

E. Lobacheva, N. Chirkova, D. Vetrov. Bayesian Sparsification of Recurrent Neural Networks. International Conference on Machine Learning (ICML) 2017, Workshop (rank A*)

S. Bartunov, D. Vetrov. Fast Adaptation in Generative Models with Generative Matching Networks. International Conference on Learning Representations (ICLR) 2017, Workshop

M. Figurnov, A. Ibraimova, D. Vetrov, P. Kohli. PerforatedCNNs: Acceleration through Elimination of Redundant Convolutions. Advances in Neural Information Processing Systems, 2016 (Q1)

S. Bartunov, D. Kondrashkin, A. Osokin, D. Vetrov. Breaking Sticks and Ambiguities with Adaptive Skip-gram. International Conference on Artificial Intelligence and Statistics (AISTATS) 2016 (rank A)

M. Figurnov, D. Vetrov, P. Kohli. PerforatedCNNs: Acceleration through Elimination of Redundant Convolutions. International Conference on Learning Representations (ICLR) 2016, Workshop track.

A. Kirillov, B. Savchynskyy, D. Schlesinger, D. Vetrov, C. Rother. Inferring M-Best Diverse Labelings in a Single One. Proceedings of the International Conference on Computer Vision (ICCV) 2015 (rank A*)

A. Novikov, D. Podoprikin, A. Osokin, D. Vetrov. Tensorizing Neural Networks. In Advances in Neural Information Processing Systems 28 (NIPS) 2015 (rank A*)

A. Kirillov, D. Schlesinger, D. Vetrov, C. Rother, B. Savchynskyy. M-Best-Diverse Labelings for Submodular Energies and Beyond. In Advances in Neural Information Processing Systems 28 (NIPS) 2015 (rank A*)

A. Osokin, D. Vetrov. Submodular relaxation for inference in Markov random fields. IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) 2015 (Q1)

S. Bartunov, D. Vetrov. Variational Inference for Sequential Distance Dependent Chinese Restaurant Process. Proceedings of the 31st International Conference on Machine Learning, Beijing, China, 2014. JMLR: W&CP volume 32. (rank A*)

A. Novikov, A. Rodomanov, A. Osokin, D. Vetrov. Putting MRFs on a Tensor Train. Proceedings of the 31st International Conference on Machine Learning, Beijing, China, 2014. JMLR: W&CP volume 32. (rank A*)

Hobby

World history, World War II