Đorđe Miladinović

Curriculum Vitæ

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https://djordjemila.github.io/

Education

Sep 2017- **PhD in Artificial Intelligence**, *ETH Zurich*, *Department of Computer Science*.
Supervision: Prof. Dr. Joachim M. Buhmann
Topics: Deep Generative Models; Representation Learning; EEG Sleep Analysis; Granger Causality;

2013-2016 **Master's Degree**, *ETH Zurich*, *Department of Computer Science*.

2009-2013 **Bachelor's Degree**, *University of Belgrade Faculty of Electrical Engineering*.

Professional Experience

Autumn 2018 **Max Planck Institute for Intelligent Systems**, *Research stay*.
Topic: Learning causal disentangled representations.

Spring 2017 **ETH Zurich, Department of Computer Science**, *Research assistantship*.
Topic: Deep learning for EEG sleep classification.

Aut/Win 2016 **Logitech Europe S.A. Data Science & Advanced Analytics**, *Internship*.
Topic: Mining and predicting behavioral patterns from user log data.

Spr/Sum 2016 **Disney Research Zurich, Vision and Sensing Research Group**, *Master's thesis*.
Topic: Metric learning for comparing robot to human motion activity.

Notable Projects

Sleep Learning A web platform for high-throughput analysis of sleep patterns used daily by academic and industrial researchers worldwide: `https://sleeplearning.ethz.ch/`

SDN A novel neural network for image generation: `https://github.com/djordjemila/sdn`

Computer Skills

Proficient in Python, PyTorch, Latex

Intermediate C, C++, Matlab, Java

Experienced in Hadoop, SQL, C#, Javascript, NodeJS, HTML, CSS, Ruby on Rails

Other Linux, Microsoft Windows, MS Office, Git

Languages

Serbo-Croatian Native

English Full professional proficiency

German B1 Level

Spanish Beginner

Academic Activities

Autumn 2019 **NeurIPS 2019, Disentanglement Challenge**, *Co-organizer; https://bit.ly/36bTD4W*.

2017-2019 **Reviewer at NeurIPS, ICML, ICLR**.

Publications

[1] Nora Nowak, Thomas Gaisl, **Đorđe Miladinović**, Ricards Marcinkevics, Martin Oswald, Stefan Bauer, Joachim Buhmann M., Renato Zenobi, Pablo Sinues, Steven Brown, and Malcolm Kohler. Instantaneous metabolic changes with sleep stage transitions observed in exhaled breath. In *submission to Cell Metabolism*, 2021.

[2] Joao Carvalho, Joao Santinha, **Đorđe Miladinović**, and Joachim Buhmann M. Spatially dependent u-nets: Highly accurate architectures for medical imaging segmentation. In *submission to MICCAI*, 2021.

[3] **Đorđe Miladinović** and Joachim Buhmann M. Dynamic dropout: Regulating teacher forcing in autoregressive models. In *submission to International Conference on Machine Learning*, 2021.

[4] **Đorđe Miladinović**, Aleksandar Stanić, Stefan Bauer, Jürgen Schimdhuber, and Joachim Buhmann M. Spatial dependency networks: Neural layers for improved generative image modeling. In *International Conference on Learning Representations*, 2021.

[5] Muhammad Waleed Gondal, Manuel Wuthrich, **Đorđe Miladinović**, Francesco Locatello, Martin Breidt, Valentin Volchkov, Joel Akpo, Olivier Bachem, Bernhard Schölkopf, and Stefan Bauer. On the transfer of inductive bias from simulation to the real world: a new disentanglement dataset. In *Advances in Neural Information Processing Systems*, pages 15740–15751, 2019.

[6] **Đorđe Miladinović**, Muhammad Waleed Gondal, Bernhard Schölkopf, Joachim M Buhmann, and Stefan Bauer. Disentangled state space representations. *arXiv preprint arXiv:1906.03255*, 2019.

[7] Raphael Suter, **Đorđe Miladinović**, Bernhard Schölkopf, and Stefan Bauer. Robustly disentangled causal mechanisms: Validating deep representations for interventional robustness. In *International Conference on Machine Learning*, pages 6056–6065. PMLR, 2019.

[8] **Đorđe Miladinović**, Christine Muheim, Stefan Bauer, Andrea Spinnler, Daniela Noain, Mojtaba Bandarabadi, Benjamin Gallusser, Gabriel Krummenacher, Christian Baumann, Antoine Adamantidis, et al. Spindle: End-to-end learning from eeg/emg to extrapolate animal sleep scoring across experimental settings, labs and species. *PLoS computational biology*, 15(4):e1006968, 2019.

[9] Patrick Schwab, **Đorđe Miladinović**, and Walter Karlen. Granger-causal attentive mixtures of experts: Learning important features with neural networks. In *Proceedings of the AAAI Conference on Artificial Intelligence*, volume 33, pages 4846–4853, 2019.

[10] Stefan Bauer, Nico S Gorbach, **Đorđe Miladinović**, and Joachim M Buhmann. Efficient and flexible inference for stochastic systems. In *Advances in Neural Information Processing Systems*, pages 6988–6998, 2017.