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.