Jakub M. Tomczak

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Google Scholar https://scholar.google.com/citations?user=XB99pR4AAAAJ

Work Experience

Nov 2019 - Present **Vrije Unviersiteit Amsterdam**, the Netherlands
Assistant Professor of Artificial Intelligence

Research: deep generative modeling, deep learning, derivative-free optimization

Oct 2018 - Dec 2019 **Qualcomm AI Research**, Amsterdam, the Netherlands (**industry**)
Deep Learning Researcher (Staff Engineer)

Research: video compression, Bayesian optimization, deep learning

Oct 2016 - Sept 2018 **Universiteit van Amsterdam**, the Netherlands
Postdoc/Marie Sklodowska-Curie Individual Fellow, supervision: Prof. Max Welling

Research: deep generative modeling, medical imaging

Oct 2014 - Sept 2016 **Wroclaw University of Technology**, Poland
Assistant Professor

Research: deep generative modeling, deep learning, machine learning

Oct 2012 - Sept 2014 **Wroclaw University of Technology**, Poland
Postdoc, supervision: Prof. Jerzy Swiątek

Research: machine learning

Jun 2009 - Sept 2012 **Wroclaw University of Technology**, Poland
Research assistant, supervision: Prof. Adam Grzech

Education

Oct 2009- Mar 2013 **Ph.D. in computer science (*with honors*), specialization: machine learning**
Wroclaw University of Technology, Poland

Title: Incremental Knowledge Extraction from Data for Non-Stationary Objects
Supervisor: Prof. Jerzy Swiątek

Aug 2008- Dec 2009 **M.Sc. in computer science**
Blekinge Institute of Technology, Sweden

Supervisor: Prof. Ludwik Kuzniarz

Oct 2004- Jul 2009 **M.Sc. in computer science**
Wroclaw University of Technology, Poland

Track: Pre-PhD
Supervisor: Prof. Jerzy Swiątek

Grants

2016-2018 **Principal Investigator**, Marie Sklodowska-Curie Individual Fellowship (EU), **177 599 €**

2016 **Researcher**, NCR&D (Poland), **7 909 741 PLN**

2013-2015 **Researcher**, NCR&D (Poland, EU), **10 672 218 PLN**

2009-2013 **Researcher**, NCR&D (Poland, EU), **36 000 000 PLN**

2012-2016 **Principal investigator**, individual grants four times, approx. **10 000 €**

AWARDS

2018-2020 **Oral presentations**: CVPR 2020, MIDL 2020, UAI 2019 (x2), AISTATS 2018

2019 Highest scoring reviewer (**top 400**) at NeurIPS 2019

2013 The Faculty award for **best Ph.D. theses**, Wroclaw University of Technology

2009 **The best M.Sc. thesis in Poland**, Polish Information Processing Society

SELECTED PUBLICATIONS

- **Conference articles**

1. Y. Perugachi-Diaz, J.M. Tomczak, S. Bhulai, *Invertible DenseNets with Concatenated LipSwish*, NeurIPS 2021

2. E. van Krieken, J.M. Tomczak, A. Ten Teije, *Storchastic: A Framework for General Stochastic Automatic Differentiation*, NeurIPS 2021

3. M. Ilse, J.M. Tomczak, P. Forré, *Selecting Data Augmentation for Simulating Interventions*, ICML 2021

4. E. Hoogeboom, V.G. Satorras, J.M. Tomczak, M. Welling, *The Convolution Exponential and Generalized Sylvester Flows*, NeurIPS 2020

5. D.W. Romero, E.J. Bekkers, J.M. Tomczak, M. Hoogendoorn, *Attentive Group Equivariant Convolutional Networks*, ICML 2020

6. M. Ilse, J.M. Tomczak, C. Louizos, M. Welling, *DIVA: Domain Invariant Variational Autoencoder*, MIDL 2020

7. D. Abati, J.M. Tomczak, T. Blankevoort, S. Calderara, R. Cucchiara, B.E. Bejnordi, *Conditional Channel Gated Networks for Task-Aware Continual Learning*, CVPR, 2020

8. C. Oh, J.M. Tomczak, E. Gavves, M. Welling, *Combinatorial Bayesian Optimization using the Graph Cartesian Product*, NeurIPS 2019

9. A. Habibian, T. van Rozendaal, J.M. Tomczak, T.S. Cohen, *Video compression with rate-distortion autoencoders*, ICCV 2019

10. M. Ilse, J.M. Tomczak, M. Welling, *Attention-based Deep Multiple Instance Learning*, ICML 2018

11. J.M. Tomczak, M. Welling, *VAE with a VampPrior*, AISTATS 2018

12. T. Davidson, L. Falorsi, N. de Cao, T. Kipf, J.M. Tomczak, *Hyperspherical Variational Auto-Encoders*, UAI 2018

13. R. van den Berg, L. Hasenclever, J.M. Tomczak, M. Welling, *Sylvester Normalizing Flow for Variational Inference*, UAI 2018

- **Journal articles**

1. I. Gatopoulos, J.M. Tomczak, *Self-Supervised Variational Auto-Encoders*, Entropy, 2021

2. I. Auzina, J.M. Tomczak, *Approximate Bayesian computation for discrete spaces*, Entropy 2021

3. E. Weglarz-Tomczak, J.M. Tomczak, A.E. Eiben, S. Brul, *Population-Based Parameter Identification for Dynamical Models of Biological Networks with an Application to Saccharomyces cerevisiae*, Processes, 2021

4. E. Weglarz-Tomczak, J.M. Tomczak, M. Talma, M. Burda-Grabowska, M. Giurg, S. Brul, *Identification of ebselen and its analogues as potent covalent inhibitors of papain-like protease from SARS-CoV-2*, Scientific Reports, 2021

5. E. Weglarz-Tomczak, J.M. Tomczak, S. Brul, *M2R: a Python add-on to cobrapy for modifying human genome-scale metabolic reconstruction using the gut microbiota models*, Bioinformatics, 2021

6. J.M. Tomczak, E. Weglarz-Tomczak, *Estimating kinetic constants in the Michaelis-Menten model from one enzymatic assay using Approximate Bayesian Computation*, FEBS Letters, 2019

SELECTED REVIEWING SERVICES

- **Conferences**

NeurIPS (2018, 2019, 2020, Area Chair: 2021), ICML (2019, 2020, 2021), ICLR (2019, 2020, 2021, 2022), AISTATS (2019, 2020, 2021, Area Chair: 2022), UAI (2021), MIDL (2018), INNF+@ICML (2020), INNF@NeurIPS (2019)

- **Journals**

IEEE Trans. on Pattern Analysis and Machine Intelligence, Journal of Machine Learning Research, Bioinformatics, Medical Image Analysis, Expert Systems with Applications, IEEE Transactions on Neural Systems & Rehabilitation Engineering, Knowledge-Based Systems, IEEE Journal of Biomedical and Health Informatics„ European Journal of Operation Research, Neural Processing Letters, BMC Bioinformatics