

TIANLIN LIU

✉ t.liu@unibas.ch 🏠 tianlinliu.com

Updated: 10th March 2022

EDUCATION

- 2020 - present **University of Basel**, Switzerland
Ph.D. student in Computer Science
Advisor: Professor Ivan Dokmanić
- 2017 – 2019 **Jacobs University Bremen**, Germany
MSc in Data Engineering
Advisor: Professor Herbert Jaeger
- 2013 – 2016 **Jacobs University Bremen**, Germany
BSc in Mathematics
Advisor: Professor Götz Pfander

AWARDS AND HONORS

- 2022 SIAM Student Travel Award
awarded by the SIAM Conference on Imaging Science (IS22).
- 2021 Oberwolfach Leibniz Graduate Student Grant
awarded by the Oberwolfach Research Institute for Mathematics.
- 2019 Dean's Prize for Outstanding Master's Thesis
awarded by Jacobs University Bremen, Germany.
- 2019 IEEE NER 2019 Best Paper Finalist Award
awarded by the 9th IEEE Conference on Neural Engineering (NER).
- 2018 - 2019 SmartStart-1 Fellowship
awarded by the Bernstein Network and the Volkswagen foundation.
- 2019 ACM-BCB 2018 Travel Award
awarded by the 2018 Biocreative/OHNLP workshop of the ACM-BCB.
- 2013 - 2019 Scholarship for undergraduate and master's study
awarded by Jacobs University Bremen.

PUBLICATIONS

- [9] Anastasis Kratsios, Behnoosh Zamanlooy, [Tianlin Liu](#), and Ivan Dokmanić. Universal Approximation Under Constraints is Possible with Transformers. In Proceedings of the 10th International Conference on Learning Representations (ICLR 2022).
Spotlight presentation
- [8] [Tianlin Liu](#), Anadi Chaman, David Belius, and Ivan Dokmanić. Learning Multiscale Convolutional Dictionaries for Image Reconstruction. Submitted, 2021.

- [7] Tianlin Liu and Friedemann Zenke. Finding Trainable Sparse Networks through Neural Tangent Transfer. In Proceedings of 37th International Conference on Machine Learning (ICML 2020).
- [6] Zekun Yang* and Tianlin Liu* (*Equal contribution). Causally Denoise Word Embeddings Using Half-Sibling Regression. In Proceedings of 34th AAAI Conference on Artificial Intelligence (AAAI 2020).
- [5] Tianlin Liu. Harnessing Slow Dynamics in Neuromorphic Computation. Master's thesis, 2019.
Dean's Prize for Outstanding Master's Thesis
- [4] Tianlin Liu, Lyle Ungar, and João Sedoc. Continual Learning for Sentence Representations Using Conceptors. In Proceedings of the 17th Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL 2019).
- [3] Xu He, Tianlin Liu, Fatemeh Hadaeghi, and Herbert Jaeger. Reservoir Transfer on Analog Neuromorphic Hardware. In Proceedings of the 9th International IEEE Conference on Neural Engineering (NER 2019).
Best Paper Finalist Award (3rd place out of 467 accepted papers)
- [2] Tianlin Liu, Lyle Ungar, and João Sedoc. Unsupervised Post-processing of Word Vectors via Conceptor Negation. In Proceedings of 33th AAAI Conference on Artificial Intelligence (AAAI 2019).
- [1] Tianlin Liu and Arvid Kappas. Predicting engagement breakdown in HRI using thin-slices of facial expressions. In Proceedings of the AAAI Workshop on Affective Content Analysis, 2018.

SERVICES

Conference reviewer: ICML (2021, 2022), NeurIPS (2021), and ICLR (2022).
Journal reviewer: IEEE Open Journal of Signal Processing.

GRADUATE TEACHING ASSISTANT

| | |
|------------|--|
| 2022 | Machine Learning on Graphs, Groups, and Manifolds Instructor: Prof. Ivan Dokmanić (University of Basel) |
| 2021 | Computational Sustainability and AI for Social Good Instructor: Prof. Ivan Dokmanić (University of Basel) |
| 2021 | High-dimensional Data Analysis and Learning on Graphs Instructor: Prof. Ivan Dokmanić (University of Basel) |
| 2018, 2019 | Machine Learning Instructor: Prof. Herbert Jaeger (Jacobs University Bremen) |
| 2018, 2019 | Principles of Statistical Modeling Instructor: Prof. Herbert Jaeger (Jacobs University Bremen) |