

YOSSI ADI - CURRICULUM VITAE

PERSONAL INFORMATION

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RESEARCH INTERESTS

Machine Learning; Deep Learning; Trustworthy Learning Algorithms;
Audio, Speech and Language Processing; Music.

WORK EXPERIENCE

2022-present Assistant Professor (Senior Lecturer), School of Computer Science and
Engineering, The Hebrew University of Jerusalem.

2019-present Research Scientist, FACEBOOK AI RESEARCH, TEL AVIV LAB. I am working on
machine learning and deep learning models for audio and speech processing.

2015-2016 Machine Learning Researcher, Machine Learning Technologies Group, IBM,
HAIFA RESEARCH LABS. I was working on analysis of unsupervised sentence
embeddings. [[paper1](#)], [[paper2](#)].

EDUCATION

2016-2019 Ph.D. in Computer Science, Department of Computer Science,
Bar-Ilan University, Ramat-Gan, Israel.
Advisor: Dr. Joseph Keshet.
Dissertation: *On the Robustness of Deep Neural Models and Their Applications to
Speech Science*.

2014-2015 M.Sc in Computer Science, Department of Computer Science,
Bar-Ilan University, Ramat-Gan, Israel.
Advisor: Dr. Joseph Keshet.
Thesis topic: *Automatic Analysis of Speech and Language Data using Deep
Structured Learning*.

2011-2013 B.Sc in Computer Science, Summa cum laude
School of Computer Science,
College of Management Academic Studies, Rishon-Le Zion, Israel.

AWARDS AND SCHOLARSHIPS

2020 Best Doctoral Dissertation Award - The Israeli Association for Artificial
Intelligence (IAAI).

2017 Rector's Award for Excellence in Academic Studies - Bar-Ilan University.

2016 President Award for Excellence (Ph.D Students) - Bar-Ilan University.

2014 Zvulun Hammer Scholarship.

2012 President Award for Excellence - College of Management Academic Studies.

PUBLICATIONS

2022 Efthymios TZINIS, **Yossi Adi**, Vamsi KRISHNA, ITHAPU, Buye XU, Paris
SMARAGDIS, Anurag KUMAR. RemixIT: Continual Self-Training of Speech

- Enhancement Models via Bootstrapped Remixing. *IEEE Journal of Selected Topics in Signal Processing*.
- 2022 Arnon TURETZKY, Tzvi MICHELSON, **Yossi Adi**, Shmuel PELEG. Deep Audio Waveform Prior. *The 23rd Annual Conference of the International Speech Communication Association (Interspeech)*.
- 2022 Or TAL, Moshe MANDEL, Felix KREUK, **Yossi Adi**. A Systematic Comparison of Phonetic Aware Techniques for Speech Enhancement. *The 23rd Annual Conference of the International Speech Communication Association (Interspeech)*.
- 2021 Shahaf BASSAN, **Yossi Adi**, Jeffrey S. ROSENSCHEIN. Unsupervised Symbolic Music Segmentation using Ensemble Temporal Prediction Errors. *The 23rd Annual Conference of the International Speech Communication Association (Interspeech)*.
- 2022 Sravya POPURI, Peng-Jen CHEN, Changhan WANG, Juan PINO, **Yossi Adi**, Jiatao GU, Wei-Ning HSU, Ann LEE. Enhanced Direct Speech-to-Speech Translation Using Self-supervised Pre-training and Data Augmentation. *The 23rd Annual Conference of the International Speech Communication Association (Interspeech)*.
- 2022 Maureen de SEYSSEL, Marvin LAVECHIN, **Yossi Adi**, Emmanuel DUPOUX, Guillaume WISNIEWSKI. Probing Phoneme, Language and Speaker Information in Unsupervised Speech Representations. *The 23rd Annual Conference of the International Speech Communication Association (Interspeech)*.
- 2022 Ann LEE, Hongyu GONG, Paul-Ambroise DUQUENNE, Holger SCHWENK, Peng-Jen CHEN, Changhan WANG, Sravya POPURI, **Yossi Adi**, Juan PINO, Jiatao GU, Wei-Ning HSU. Textless Speech-to-Speech Translation on Real Data. *Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)*.
- 2022 Eugene KHARITONOV, Jade COPET, Kushal LAKHOTIA, Tu-Anh NGUYEN, Paden TOMASELLO, Ann LEE, Ali ELKAHKY, Wei-Ning HSU, Abdelrahman MOHAMED, Emmanuel DUPOUX, **Yossi Adi**. textless-lib: a Library for Textless Spoken Language Processing. *Conference of the North American Chapter of the Association for Computational Linguistics (NAACL): System Demonstrations*.
- 2022 Eugene KHARITONOV*, Ann LEE*, Adam POLYAK, **Yossi Adi**, Jade COPET, Kushal LAKHOTIA, Tu-Anh NGUYEN, Morgane RIVIÈRE, Abdelrahman MOHAMED, Emmanuel DUPOUX, Wei-Ning HSU. Text-Free Prosody-Aware Generative Spoken Language Modeling. *The 60th Annual Meeting of the Association for Computational Linguistics (ACL)*.
- 2022 Ann LEE, Peng-Jen CHEN, Changhan WANG, Jiatao GU, Xutai MA, Adam POLYAK, **Yossi Adi**, Qing HE, Yun TANG, Juan PINO, Wei-Ning HSU. Direct Speech-to-Speech Translation with Discrete Units. *The 60th Annual Meeting of the Association for Computational Linguistics (ACL)*.
- 2022 Alon BERLINER, Guy ROTMAN, **Yossi Adi**, Roi REICHART, Tamir HAZAN. Learning Discrete Structured Variational Auto-Encoder Using Natural Evolution Strategies. *International Conference on Learning Representations (ICLR)*.
- 2022 Efthymios TZINIS, **Yossi Adi**, Vamsi K. ITHAPU, Buye XU, Anurag KUMAR. Continual Self-Training with Bootstrapped Remixing For Speech Enhancement. *The 47th IEEE International Conference in Acoustic, Speech and Signal Processing (ICASSP)*.
- 2021 Changhan WANG*, Wei-Ning HSU*, **Yossi Adi**, Adam POLYAK, Ann LEE, Peng-Jen CHEN, Jiatao GU, Juan PINO. FAIRSEQ S²: A Scalable and Integrable Speech Synthesis Toolkit. *Conference on Empirical Methods in Natural Language Processing (EMNLP): System Demonstrations*.
- 2021 Kushal LAKHOTIA*, Eugene KHARITONOV*, Wei-Ning HSU, **Yossi Adi**, Adam POLYAK, Benjamin BOLTE, Tu-Anh NGUYEN, Jade COPET, Alexei BAEVSKI,

- Michael AULI, Alexis CONNEAU, Adelrahman MOHAMED, Emmanuel DUPOUX. On Generative Spoken Language Modeling from Raw Audio. *Transactions of the Association for Computational Linguistics (TACL)*.
- 2021 Adam POLYAK, **Yossi Adi**, Jade COPET, Ori KABELI, Eugene KHARITONOV, Kushal LAKHOTIA, Wei-Ning HSU, Adelrahman MOHAMED, Emmanuel DUPOUX. Speech Resynthesis from Discrete Disentangled Self-Supervised Representations. *The 22nd Annual Conference of the International Speech Communication Association (Interspeech)*.
- 2021 Shahar SEGAL, **Yossi Adi**, Benny PINKAS, Carsten BAUM, Chaya GANESH, Joseph KESHET. Fairness in the Eyes of the Data: Certifying Machine-Learning Models. *The Forth AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society (AIES)*.
- 2021 Adam POLYAK, Lior WOLF, **Yossi Adi**, Ori KABELI, Yaniv TAIGMAN. High Fidelity Speech Regeneration with Application to Speech Enhancement. *The 46th IEEE International Conference in Acoustic, Speech and Signal Processing (ICASSP)*.
- 2021 Shlomo E. CHAZAN, Lior WOLF, Eliya NACHMANI, **Yossi Adi**. Single Channel Voice Separation for Unknown Number of Speakers Under Reverberant and Noisy Settings. *The 46th IEEE International Conference in Acoustic, Speech and Signal Processing (ICASSP)*.
- 2021 Ke TAN, Buye XU, Anurag KUMAR, Eliya NACHMANI, **Yossi Adi**. SAGRNN: Self-Attentive Gated RNN for Binaural Speaker Separation with Interaural Cue Preservation. *IEEE Signal Processing Letters*, vol. 28, pp. 26-30.
- 2020 Felix KREUK, Joseph KESHET, **Yossi Adi**. Self-Supervised Contrastive Learning for Unsupervised Phoneme Segmentation. *The 21st Annual Conference of the International Speech Communication Association (Interspeech)*.
- 2020 Adam POLYAK, Lior WOLF, **Yossi Adi**, Yaniv TAIGMAN. Unsupervised Cross-Domain Singing Voice Conversion. *The 21st Annual Conference of the International Speech Communication Association (Interspeech)*.
- 2020 Alexandre DÉFOSSEZ, Gabriel SYNNAEVE, **Yossi Adi**. Real Time Speech Enhancement in the Waveform Domain. *The 21st Annual Conference of the International Speech Communication Association (Interspeech)*.
- 2020 Felix KREUK, **Yossi Adi**, Bhiksha RAJ, Rita SINGH, Joseph KESHET. Hide and Speak: Towards Deep Neural Networks for Speech Steganography. *The 21st Annual Conference of the International Speech Communication Association (Interspeech)*.
- 2020 Eliya NACHMANI, **Yossi Adi**, Lior WOLF. Voice Separation with an Unknown Number of Multiple Speakers. *The 37th International Conference on Machine Learning (ICML)*.
- 2020 Felix KREUK, Yaniv SHEENA, Joseph KESHET, **Yossi Adi**. Phoneme Boundary Detection Using Learnable Segmental Features. *The 45th IEEE International Conference in Acoustic, Speech and Signal Processing (ICASSP)*.
- 2020 Ben GOLDBERGER, **Yossi Adi**, Joseph KESHET, Guy KATZ. Minimal Modifications of Deep Neural Networks using Verification. *The 23rd International Conference on Logic for Programming, Artificial Intelligence and Reasoning (LPAR)*.
- 2019 Jacob T. COHEN, Alma COHEN, Limor BENYAMINI, **Yossi Adi**, Joseph KESHET. Predicting Glottal Closure Insufficiency using Fundamental Frequency Contour Analysis. *Head & neck*, 41 (7), 2324-2331.
- 2019 **Yossi Adi**, Neil ZEGHIDOUR, Ronan COLLOBERT, Nicolas USUNIER, Vitaliy LIPTCHINSKY, Gabriel SYNNAEVE. To Reverse The Gradient or Not: An Empirical Comparison of Adversarial and Multi-Task Learning in Speech

- Recognition. *The 44th IEEE International Conference in Acoustic, Speech and Signal Processing (ICASSP)*.
- 2018 Gabi SHALEV, **Yossi Adi** and Joseph KESHET. Out-of-Distribution Detection using Multiple Semantic Label Representations. *The 32nd Annual Conference on Neural Information Processing Systems (NeurIPS)*.
- 2018 Matthew GOLDRICK, Rhonda McCLAIN Baum, Emily CIBELLI, **Yossi Adi**, Erin GUSTAFSON, Cornelia MOERS and Joseph KESHET. The Influence of Lexical Selection Disruptions on Articulation. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 45 (6), 1107-1141.
- 2018 **Yossi Adi**, Carsten BAUM, Moustapha CISSE, Benny PINKAS and Joseph KESHET. Turning Your Weakness Into a Strength: Watermarking Deep Neural Networks by Backdooring. *USENIX Security Symposium*.
- 2018 Felix KREUK, **Yossi Adi**, Moustapha CISSE, and Joseph KESHET. Fooling End-to-End Speaker Verification With Adversarial Examples. *The 43rd IEEE International Conference in Acoustic, Speech and Signal Processing (ICASSP)*.
- 2017 Moustapha CISSE, **Yossi Adi**, Natalia NEVEROVA, and Joseph KESHET. Houdini: Fooling Deep Structured Visual and Speech Recognition Models with Adversarial Examples. *The 31st Annual Conference on Neural Information Processing Systems (NeurIPS)*.
- 2017 Einat NAAMAN, **Yossi Adi**, and Joseph KESHET. Learning Similarity Function for Pronunciation Variations. *The 18th Annual Conference of the International Speech Communication Association (Interspeech)*.
- 2017 Yaniv SHEENA, Misha HEJNA, **Yossi Adi**, and Joseph KESHET. Automatic Measurement of Pre-aspiration. *The 18th Annual Conference of the International Speech Communication Association (Interspeech)*.
- 2017 **Yossi Adi**, Einat KERMANY, Yonatan BELINKOV, Ofer LAVI and Yoav GOLDBERG. Fine-grained Analysis of Sentence Embeddings Using Auxiliary Prediction Tasks. *International Conference on Learning Representations (ICLR)*.
- 2017 **Yossi Adi**, Joseph KESHET, Emily CIBELLI, and Matt GOLDRICK. Sequence Segmentation Using Joint RNN and Structured Prediction Models. *The 42st IEEE International Conference in Acoustic, Speech and Signal Processing (ICASSP)*.
- 2017 **Yossi Adi**, Einat KERMANY, Yonatan BELINKOV, Ofer LAVI and Yoav GOLDBERG. Analysis of sentence embedding models using prediction tasks in natural language processing. *IBM Journal of Research and Development*, 61 (4/5), 31-39.
- 2016 **Yossi Adi**, Joseph KESHET, Emily CIBELLI, Erin GUSTAFSON, Cynthia CLOPPER and Matt GOLDRICK. Automatic Measurement of Vowel Duration via Structured Prediction. *Journal of the Acoustical Society of America*, 140 (6), 4517-4527.
- 2016 **Yossi Adi**, Joseph KESHET, Olga DMITRIEVA and Matt GOLDRICK. Automatic Measurement of Voice Onset Time and Prevoicing using Recurrent Neural Networks. *The 17th Annual Conference of the International Speech Communication Association (Interspeech)*.
- 2016 **Yossi Adi** and Joseph KESHET. StructED: Risk Minimization in Structured Prediction. *Journal of Machine Learning Research*, 17 (1), 2282-2286.
- 2015 **Yossi Adi**, Joseph KESHET and Matt GOLDRICK. Vowel Duration Measurement Using Deep Neural Networks. *The 25th IEEE International Workshop on Machine Learning for Signal Processing (MLSP)*.

TEACHING

- 2018-2019 Lecturer, RIMON SCHOOL OF JAZZ AND CONTEMPORARY MUSIC. Drums and Technology.

2017-2019 Teaching Assistant, BAR-ILAN UNIVERSITY. Introduction to Machine Learning, Automatic Speech Recognition.

2015-2017 Teaching Assistant, COLLEGE OF MANAGEMENT ACADEMIC STUDIES. Introduction to Computer Science, Data Structures, Algorithms II and OOP.

SERVICE

2022 Reviewer for: NeurIPS, ICML, ICLR, ICASSP, InterSpeech..

2021 Reviewer for: NeurIPS, ICML, ICLR, ICASSP, InterSpeech, MLSP.

2020 Reviewer for: NeurIPS, ICML, UAI, ICLR, ICASSP, InterSpeech, MLSP.
Senior Program Committee for: IJCAI.

2019 Reviewer for: NeurIPS, ICML, ICASSP, ICLR, UAI, IJCAI, MLSP.

2018 Reviewer for: NeurIPS, ICML, ICASSP, MLSP, MLSLP.

OTHER INFORMATION

Music I'm a professional drummer and very passionate about rhythm, drums and groove. Drumming has always been my passion and very big part of my life. Here are few links to my music: [YouTube](#), [iTunes](#), [WebSite](#).

Interests Drums · Music · Sound · Audio