YUVAL MEIR

PHD | AI RESEARCH SCIENTIST

CONTACT

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LinkedIn

Google Scholar

SKILLS

- Teamwork
- Time Management
- Effective Communication
- Critical Thinking

INTERNATIONAL CONFERENCES

ACAIN2022, ITALY
Invited talk

LANGUAGES

- English - Fluent
- Hebrew

HOBBIES

- Playing chess
- Swimming

SUMMARY

I'm a passionate and curious researcher with an academic background in physics, math and neural networks. My research has centered on developing algorithms for artificial intelligence, deep learning, and computer vision. I am dedicated to leveraging cutting-edge research to drive innovation and tackle complex problems.

EDUCATION

- **Ph.D. in Physics and Artificial Intelligence** 2021 – 2024
  Bar Ilan University, Physics Department
  (Advised by Professor Ido Kanter)
  - Published 11 peer-reviewed papers.
  - Developed AI algorithms in Deep Learning and Computer Vision.
  - Conducted research, and designed and analyzed experiments, and mentored lab members.
  - Worked with Python, Pytorch, Numpy, Pandas, Sklearn, etc.
- **M.Sc. in Theoretical Physics** 2019 – 2021
  Bar Ilan University, Physics Department
  - Grade: 95.3 (with honors)
  - Combined track
- **B.Sc. in Physics** 2011 – 2014
  Bar Ilan University, Physics Department
  - While studying in an excellence program (MOFET) in high school.

WORK EXPERIENCE

Teaching assistant, Bar-Ilan University 2019 – 2024

- Information Theory and Learning Algorithms, Physics for brain science and biologists, Optics Lab.
- High teaching score: 4.7/5

Israel Defense Force, Ministry of Defense 2016 – 2018

AWARDS

The Reba Dam Scholarship for Excellent PhD students 2024

The Rector's Prize for Excellent PhD students 2022

Bar-Ilan President's Scholarship for Outstanding Doctoral Fellows 2021 – 2024

PUBLICATIONS

1. **Advanced confidence methods in deep learning**
   Yuval Meir*, Ofek Tevet, Ella Koresh, Yarden Tzach and Ido Kanter
   Physica A, Volume 641, Number 129758 (2024)

2. **Towards a universal mechanism for successful deep learning**
   Yuval Meir, Yarden Tzach, Shiri Hodassman, Ofek Tevet and Ido Kanter
   Scientific Reports, Volume 14, Number 5881 (2024)

3. **Enhancing the accuracies by performing pooling decisions adjacent to the output layer**
   Yuval Meir, Yarden Tzach, Ronit D. Gross, Ofek Tevet, Roni Vardi, Ido Kanter
   Scientific Reports, Volume 13, Number 13385 (2023)

4. **Efficient shallow learning as an alternative to deep learning**
   Yuval Meir, Ofek Tevet, Yarden Tzach, Shiri Hodassman, Ronit D. Gross, Ido Kanter
   Scientific Reports, Volume 13, Number 5423 (2023)

5. **Learning on tree architectures outperforms a convolutional feedforward network**
   Yuval Meir, Itamar Ben-Noam, Yarden Tzach, Shiri Hodassman & Ido Kanter
   Scientific Reports, Volume 13, Number 962 (2023), TOP100 of SciRep.

6. **Power-law scaling to assist with key challenges in artificial intelligence**
   Yuval Meir*, Shira Sardi*, Shiri Hodassman*, Karin Kisos, Itamar Ben-Noam, Amir Goldental & Ido Kanter
   Scientific Reports, Volume 10, Number 19628 (2020)

7. **Scaling in Deep and Shallow Learning Architectures**
   Ella Koresh, Tal Halevi, **Yuval Meir***, Dolev Dilmoney, Tamar Dror, Ronit Gross, Ofek Tevet, Shiri Hodassman & Ido Kanter
   Physica A, Volume 646, Number 129909 (2024)

8. **Efficient shallow learning mechanism as an alternative to deep learning**
   Ofek Tevet, Ronit D. Gross, Shiri Hodassman, Tal Rogachevsky, Yarden Tzach, **Yuval Meir**, Ido Kanter
   Physica A, Volume 635, Number 129513 (2024)

9. **The mechanism underlying successful deep learning**
   Yarden Tzach, **Yuval Meir**, Ofek Tevet, Ronit D. Gross, Shiri Hodassman, Roni Vardi, Ido Kanter
   Arxiv, Computer Science, Machine Learning (2023)

10. **Brain inspired neuronal silencing mechanism to enable reliable sequence identification**
    Shiri Hodassman*, **Yuval Meir***, Karin Kisos, Itamar Ben-Noam, Yael Tugendhaft, Amir Goldental, Roni Vardi & Ido Kanter
    Scientific Reports, Volume 12, Number 16003 (2022)

11. **Brain experiments imply adaptation mechanisms which outperform common AI learning algorithms**
    Shira Sardi*, Roni Vardi*, **Yuval Meir***, Yael Tugendhaft, Shiri Hodassman, Amir Goldental & Ido Kanter
    Scientific Reports, Volume 10, Number 6923 (2020), TOP100 of SciRep.

*** Contributed equally**