HADAR AVERBUCH-ELOR

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EDUCATION

2012-2017 **Tel Aviv University**, Tel Aviv, Israel
Ph.D. in Electrical Engineering
Advisor: Prof. Daniel Cohen-Or

2008-2012 **Technion – Israel Institute of Technology**, Haifa, Israel
B.Sc in Electrical Engineering with Honors

PROFESSIONAL EXPERIENCE

2022-CURRENT **Assistant Professor of Electrical Engineering**, Tel Aviv University

2019-2022 **Postdoctoral Associate in the Department of Computer Science**, Cornell Tech
Host: Prof. Noah Snavely

2018-2019 **Research Scientist (Amazon AI Computer Vision group)**, Amazon

2016-2017 **Research Intern (Computational Photography group)**, Facebook
Host: Michael Cohen

2011-2015 **Image Processing Engineer**, Rafael, Advanced Defense Systems LTD

HONORS AND AWARDS

2022 Alon Scholarship for the Integration of Outstanding Faculty

2020 Rising Star in EECS

2019 Zuckerman Israeli Postdoctoral Scholar

2019 Tel Aviv University President Award for Women

2019 Schmidt Postdoctoral Award for Women in Mathematical and Computing Sciences

2015 Excellence scholarship from The Yitzhak and Chaya Weinstein Research Institute for Signal Processing

2014 Excellence scholarship from the School of Engineering, Tel Aviv University

2010 PEF excellence scholarship

2008 Technion scholarship for excelling applicants

PUBLICATIONS

JOURNAL PAPERS

1. Eric Chen, Jin Sun, Apoorv Khandelwal, Dani Lischinski, Noah Snavely and Hadar Averbuch-Elor. What's in a Decade? Transforming Faces Through Time. *Computer Graphics Forum, (Proceedings Eurographics 2023)*, 2023.

2. Anna Darzi, Itai Lang, Ashutosh Taklikar, Ashutosh, Hadar Averbuch-Elor and Shai Avidan. Co-occurrence Based Texture Synthesis. *Computational Visual Media, 8(2)*, 2022.

3. Or Perel, Oron Anschel, Omri Ben-Eliezer, Shai Mazor and Hadar Averbuch-Elor. Learning Multimodal Affinities for Textual Editing in Images. *ACM Transactions on Graphics*, 2020.

4. Yiftach Ginger, Dov Danon, Hadar Averbuch-Elor and Daniel Cohen-Or. Implicit pairs for boosting unpaired image-to-image translation. *Visual Informatics*, 2020.

5. Hadar Averbuch-Elor, Nadav Bar and Daniel Cohen-Or. Border-peeling clustering. *IEEE transactions on pattern analysis and machine intelligence (PAMI)*, 2019.

6. Dov Danon, Hadar Averbuch-Elor, Ohad Fried and Daniel Cohen-Or. Unsupervised natural image patch learning. *Computational Visual Media*, 5(3):229-237, 2019. **Best paper award winner**.

7. Sharon Fogel, Hadar Averbuch-Elor, Jacob Goldberger and Daniel Cohen-Or. Clustering-driven deep embedding with pairwise constraints. *IEEE Computer Graphics and Applications*, 2018.

8. Hadar Averbuch-Elor, Johannes Kopf, Tamir Hazan and Daniel Cohen-Or. Co-segmentation for Space-Time Co-located Collections. *The Visual Computer*, 2018.

9. Hadar Averbuch-Elor, Daniel Cohen-Or, Johannes Kopf and Michael Cohen. Bringing portraits to life. *ACM Transactions on Graphics (Proceeding of SIGGRAPH Asia 2017)*, 36(4), 2017.

10. Hadar Averbuch-Elor, Daniel Cohen-Or and Johannes Kopf. Smooth image sequences for data-driven morphing. *Computer Graphics Forum, (Proceedings Eurographics 2016)*, 35(2), 2016.

11. Hadar Averbuch-Elor, Yunhai Wang, Yiming Qian, Minglun Gong, Johannes Kopf, Hao Zhang and Daniel Cohen-Or. Distilled collections from textual image queries. *Computer Graphics Forum, (Proceedings Eurographics 2015)*, 34(2), 2015.

12. Hadar Averbuch-Elor and Daniel Cohen-Or. RingIt: Ring-Ordering Casual Photos of a Temporal Event. *ACM Transactions on Graphics*, 34(3), 2015.

ARTICLES IN PEER REVIEWED CONFERENCES

1. Morris Alper*, Michael Fiman* and Hadar Averbuch-Elor. Is BERT Blind? Exploring the Effect of Vision-and-Language Pretraining on Visual Language Understanding. *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2023.

2. Haotong Lin, Qianqian Wang, Ruojin Cai, Sida Peng, Hadar Averbuch-Elor, Xiaowei Zhou, Noah Snavely. Neural Scene Chronology. *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2023.

3. Jiaming Sun, Xi Chen, Qianqian Wang, Zhengqi Li, Hadar Averbuch-Elor, Xiaowei Zhou and Noah Snavely. Neural 3D Reconstruction in the wild. *SIGGRAPH Conference Proceedings*, 2022.

4. Claire Yuqing Cui*, Apoorv Khandelwal*, Yoav Artzi, Noah Snavely and Hadar Averbuch-Elor. Who's Waldo? Linking people across text and images. *Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV)*, 2021. **Oral presentation**.

5. Xiaoshi Wu*, Hadar Averbuch-Elor*, Jin Sun and Noah Snavely. Towers of Babel: Combining images, language and 3D geometry for learning multimodal vision. *Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV)*, 2021. (*equal contribution)

6. Ruojin Cai, Bharath Hariharan, Noah Snavely and Hadar Averbuch-Elor. Extreme Rotation Estimation using Dense Correlation Volumes. *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2021.

7. Margot Hanley, Apoorv Khandelwal, Hadar Averbuch-Elor, Noah Snavely and Helen Nissenbaum. An Ethical Highlighter for People-Centric Dataset Creation. *Neural Information Processing Systems Workshop on Navigating the Broader Impacts of AI Research (NeurIPSW)*, 2020.

8. Ruojin Cai*, Guandao Yang*, Hadar Averbuch-Elor, Zekun Hao, Serge Belongie, Noah Snavely and Bharath Hariharan. Learning Gradient Fields for Shape Generation. *European Conference on Computer Vision (ECCV)*, 2020. **Spotlight paper**.

9. Jin Sun, Hadar Averbuch-Elor, Qianqian Wang and Noah Snavely. Hidden Footprints: Learning Contextual Walkability from 3D Human Trails. *European Conference on Computer Vision (ECCV)*, 2020.

10. Noriyuki Kojima, Hadar Averbuch-Elor, Alexander M Rush and Yoav Artzi. What is learned in visually grounded neural syntax acquisition. *Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics (ACL)*, 2020.

11. Zekun Hao, Hadar Averbuch-Elor, Noah Snavely and Serge Belongie. DualSDF: Semantic shape manipulation using a two-level representation. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.

12. Sharon Fogel, Hadar Averbuch-Elor, Sarel Cohen, Shai Mazor and Roee Litman. ScrabbleGAN: Semi-supervised varying length handwritten text generation. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.

13. Akshay Gadi Patil, Omri Ben-Eliezer, Or Perel and Hadar Averbuch-Elor. READ: Recursive autoencoders for document layout generation. *IEEE Conference on Computer Vision and Pattern Recognition Workshop on Text and Documents in the Deep Learning Era (CVPRW)*, 2020. **Best paper award winner**.

14. Etai Littwin, Hadar Averbuch-Elor and Daniel Cohen-Or. Spherical Embedding of Inlier Silhouette Dissimilarities. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2015.

TEACHING

Fall 2022 Introduction to Digital Signal Processing, *Instructor*

Spring 2017 Fundamentals of Computer Graphics, Vision and Image Processing, *Co-Instructor*

Spring 2016 Fundamentals of Computer Graphics, Vision and Image Processing, *Co-Instructor*

Fall 2015 Random Signals and Noise, *Teaching Assistant*

Spring 2015 Fundamentals of Computer Graphics, Vision and Image Processing, *Co-Instructor*

Spring 2014 Fundamentals of Computer Graphics, Vision and Image Processing, *Co-Instructor*

Fall 2013 Random Signals and Noise, *Teaching Assistant*

Spring 2013 Digital Logical Systems, *Teaching Assistant*

Invited Talks

2023 Learning About People from Text and Images
Tel Aviv University, Weizmann Institute of Science, Ben Gurion University, Amazon, OriginAI

2022 Neural 3D Reconstruction in the Wild
Israel Vision Day
Recording

2021 Deep into 3DV: Pushing the Boundaries of 3D Vision
Tel Aviv University, Bar Ilan University, Technion, Hebrew University

2020 Generation by Decomposition
Peking University, Yale University, Harvard, ETH Zurich, Google, University of Washington
Recording

2018 Exploring Image Collections
Massachusetts Institute of Technology, Georgia Tech, Cornell-Tech, Harvard, NYU

2017 Bringing Portraits to Life
Israel Vision Day

2016 Distilled Collections and Applications
University of Washington, Technion, Ben Gurion University

2015 RingIt: Ring-ordering Casual Photos of a Temporal Event
Israeli Machine Vision Conference (IMVC), Columbia University, Hebrew University, Weizmann Institute of Science

In the Media

2020 CVPR 2020 Awards
Cornell CS News

2020 ScrabbleGAN – Adversarial Generation of Handwritten Text Images
Towards Data Science blog

2017 Bringing Portraits to Life
BBC, *New Scientist*, *Independent (UK)*, *Eurekalert!*, *Science Daily*, *Live Science*, *Calcalist*

Professional Activities

Program Committee, SIGGRAPH 2023

Area Chair, ECCV 2022

Co-organizer, *Text in Everything* workshop in ECCV 2022