

Yael Vinker

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Education

Postdoctoral Associate, MIT CSAIL

2024 - Current

Advisor: Prof. Antonio Torralba

P.hD in Computer Science (Computer Graphics/Vision, Deep Learning)

2021 - 2024

Tel Aviv University, Israel

Advisors: Prof. Daniel Cohen-Or and Prof. Ariel Shamir

Dissertation: *"Generative Visual Communication in the Era of Vision-Language Models"*

M.Sc. in Computer Science (Computer Vision, Deep Learning)

2019 - 2021

The Hebrew University of Jerusalem, Israel

Advisor: Prof. Raanan Fattal

Thesis: *"Unpaired Learning for High Dynamic Range Image Tone Mapping"*

B.Sc. in Computer Science and Visual Communication

2016 - 2019

The Hebrew University of Jerusalem and Bezalel Academy of Art and Design, Israel

Magna cum laude. GPA: 94/100

Honors & Awards

Outstanding Reviewer Award, CVPR 2025

Rising Star in EECS, MIT, 2024 ([link](#))

Eric and Wendy Schmidt Postdoctoral Award, 2024

Tel Aviv University **President's Award** for Outstanding Postdoctoral Students Abroad, 2024

Blavatnik Prize for Outstanding PhD Students in Computer Science, 2024

Nominated for the **Fulbright Postdoctoral Fellowship**, 2024 (declined)

Best Paper Award, ACM Transactions on Graphics SIGGRAPH Asia 2023, for "Concept Decomposition for Visual Exploration and Inspiration" ([link](#))

VATAT Scholarship for Outstanding Female PhD Candidates, 2023

Honorable Mention Best Paper Award, ACM Transactions on Graphics SIGGRAPH 2023, for "Word-as-Image for Semantic Typography" ([link](#))

Best Paper Award, ACM Transactions on Graphics SIGGRAPH 2022, for "CLIPasso: Semantically-Aware Object Sketching" ([link](#))

Teaching

Lecturer, Generative AI and Diffusion Models Workshop

July 2024

Reichman University

Responsibilities: Main lecturer; developed the course syllabus, presentations, and managed logistics. The workshop had 20 participants.

Lecturer, Deep Neural Networks for Computer Graphics (0368308901)

2023, 2024

Tel Aviv University

Responsibilities: Main lecturer; developed the course syllabus, presentations, and logistics from scratch. The course had 57 participants and received high ratings from students (**6.89/7**)

Teaching Assistant, Seminar in Neural Networks-Based Graphics (0368371301) 2022 - 2024
Tel Aviv University
Teaching assistant with Prof. Daniel Cohen-Or.

Publications

ACM SIGGRAPH and SIGGRAPH Asia are top-tier international conferences in computer graphics, with acceptance rate typically below 25% and publications appearing in ACM Transactions on Graphics (TOG), the flagship journal in the field. CVPR, ICCV, and NeurIPS are top-tier international conferences in computer vision and machine learning.

Key Publications

Yael Vinker, Tamar Rott Shaham, Kristine Zheng, Alex Zhao, Judith E Fan, Antonio Torralba. "SketchAgent: Language-Driven Sequential Sketch Generation." *The IEEE / CVF Computer Vision and Pattern Recognition Conference (CVPR 2025)*

Ellie Arar, Yarden Frenkel, Daniel Cohen-Or, Ariel Shamir, **Yael Vinker**. "SwiftSketch: A Diffusion Model for Image-to-Vector Sketch Generation." *ACM Transactions on Graphics (SIGGRAPH 2025)*

Mia Tang, **Yael Vinker**, Chuan Yan, Lvmin Zhang, Maneesh Agrawala. "Instance Segmentation of Scene Sketches Using Natural Image Priors." *ACM Transactions on Graphics (SIGGRAPH 2025)*

Rinon Gal*, **Yael Vinker***, Yuval Alaluf, Amit Bermano, Daniel Cohen-Or, Ariel Shamir, Gal Chechik. "Breathing Life Into Sketches Using Text-to-Video Priors." *The IEEE / CVF Computer Vision and Pattern Recognition Conference (CVPR 2024)*. **Spotlight (top 10%)**

Yael Vinker, Andrey Voynov, Daniel Cohen-Or, Ariel Shamir. "Concept Decomposition for Visual Exploration and Inspiration." *ACM Transactions on Graphics (SIGGRAPH Asia 2023)*. **Best Paper Award**

Kushin Mukherjee*, Holly Huey*, Xuanchen Lu*, **Yael Vinker**, Rio Aguina-Kang, Ariel Shamir, Judith Fan. "SEVA: Leveraging sketches to evaluate alignment between human and machine visual abstraction." *Advances in Neural Information Processing Systems (NeurIPS 2023)*

Shir Iluz*, **Yael Vinker***, Amir Hertz, Daniel Berio, Daniel Cohen-Or, Ariel Shamir. "Word-as-Image for Semantic Typography." *ACM Transactions on Graphics (SIGGRAPH 2023)*. **Honorable Mention Best Paper Award**

Hila Chefer*, Yuval Alaluf*, **Yael Vinker**, Lior Wolf, Daniel Cohen-Or. "Attend-and-Excite: Attention-Based Semantic Guidance for Text-to-Image Diffusion Models." *ACM Transactions on Graphics (SIGGRAPH 2023)*

Yael Vinker, Yuval Alaluf, Daniel Cohen-Or, Ariel Shamir. "CLIPascene: Scene Sketching with Different Types and Levels of Abstraction." *IEEE International Conference on Computer Vision (ICCV 2023)*. **Oral Presentation (top 1.68%)**

Yael Vinker, Ehsan Pajouheshgar, Jessica Y. Bo, Roman C. Bachmann, Amit Bermano, Daniel Cohen-Or, Amir Zamir, Ariel Shamir. "CLIPasso: Semantically-Aware Object Sketching." *ACM Transactions on Graphics (SIGGRAPH 2022)*. **Best Paper Award**

Yael Vinker*, Eliahu Horwitz*, Nir Zabari, Yedid Hoshen. "Image Shape Manipulation from a Single Augmented Training Sample." *IEEE International Conference on Computer Vision (ICCV 2021)*. **Oral Presentation (top 3%)**

Other Publications

Sagi Polaczek, Yuval Alaluf, Elad Richardson, **Yael Vinker**, Daniel Cohen-Or. "NeuralSVG: An Implicit Representation for Text-to-Vector Generation." *Under review (2025)*

Yarden Frenkel, **Yael Vinker**, Ariel Shamir, Daniel Cohen-Or. "Implicit Style-Content Separation using B-LoRA." *European Conference on Computer Vision (ECCV 2024)*

Omri Avrahami, Amir Hertz, **Yael Vinker**, Moab Arar, Shlomi Fruchter, Ohad Fried, Daniel Cohen-Or, Dani Lischinski. "The Chosen One: Consistent Characters in Text-to-Image Diffusion Models." *ACM Transactions on Graphics (SIGGRAPH 2024)*

Kushin Mukherjee, Holly Huey, Xuanchen Lu, **Yael Vinker**, Ariel Shamir, Judith Fan. "Evaluating machine comprehension of sketch meaning at different levels of abstraction." *The 45th Annual Meeting of the Cognitive Science Society (CogSci 2023)*

Yael Vinker, Inbar Huberman, Raanan Fattal. "Unpaired Learning for High Dynamic Range Image Tone Mapping." *IEEE International Conference on Computer Vision (ICCV 2021)*

Work & Research Experience

Student Researcher, Google Research 2022 - 2023

Creative Camera team, Google TLV

Working under Dr. Yael Pritch Knaan. Researcher in the field of generative models and VLMs.

Research Intern, Summer@EPFL Summer 2021

École polytechnique fédérale de Lausanne, Switzerland

Supervised by Prof. Amir Zamir at VILAB (Visual Intelligence and Learning Lab).

Research Intern, Disney Research Spring 2021

DisneyResearch | Studios in Zurich, Switzerland

Deep learning for content-aware video compression. Supervised by Dr. Christopher Schroers and Dr. Roberto Azevedo.

Software Engineer Intern, Google July 2019 - March 2020

LiveResults Proactive team, Google TLV

Software Engineer Intern, Google August 2018 - January 2019

OneGoogle team, Google TLV

Talks & Interviews

Runway, May 2025. "Generative Models for Visual Communication"

MIT Creative Machine Learning for Design course, April 2025

MIT CSAIL Vision-Graphics Seminar, April 2025. "Can AI Really Sketch? Advances in Generative Models for Sketching"

MIT Face to Face, April 2025. "Challenges and Advancements in Generative Models for Sketches" <https://artfinitiy.mit.edu/event/face-to-face>

AI Vision, MIT Media Lab, November 2024. "Generative Models for Visual Communication"

CMU BIG (roBot Intelligence Group), November 2024. "Generative Models for Visual Communication"

MIT CSAIL News featured my work in the [EECS Rising Stars article](#), November 2024

COGGRAPH Workshop ([link](#)), July 2024. Invited speaker in a panel on Visual Expression, Exploring the intersection of cognitive science and computer graphics

Blavatnik Prize for Outstanding Israeli Doctoral Students in Computer Science, June 2024. "Generative Visual Communication in the Era of Vision-Language Models"

QueenB Academy Month, April 2024. Sharing my academic journey with young female students

MIT CSAIL Vision-Graphics Seminar, March 2024

MIT Media Lab, *March 2024*

Google VisCAM Seminar, *March 2024*

Adobe Research GenTech Seminar, *March 2024*

Berkeley Computer Vision Seminar, *March 2024*

Graphics Cafe, Stanford University, *March 2024*

Weizmann Vision and AI Seminar, *January 2024*. "Generative Models for Abstractions"

ICCV 2023, Paris: Oral presentation for "CLIPascene: Scene Sketching with Different Types and Levels of Abstraction"

SIGGRAPH 2023, Los Angeles: Oral presentation for "Word-as-Image for Semantic Typography"

Microsoft Data Science Bond, *May 2023* ([recording](#)). "CLIPasso: Semantically-Aware Object Sketching"

Lightricks Research Seminar, *March 2023*. "CLIPasso and Word-As-Image"

Talking Papers Podcast, *March 2023*. Interview with Itzik Ben Shabat, ([recording](#))

Israeli Computer Vision Day, *January 2023* ([recording](#)). "CLIPasso: Semantically-Aware Object Sketching"

ACM SIGGRAPH Blog, *November 2022* ([article](#)). "Abstraction: The Key to Semantic Sketching"

RSIP Vision Magazine, *October 2022*. Featured on the cover page with a full interview about my work "CLIPasso: Semantically-Aware Object Sketching." ([article](#))

Community Involvement & Professional Activities

Technical Papers Committee, SIGGRAPH 2025

Workshop Organizer, "Drawing and Sketching: Art, Psychology, and Computer Graphics", SIGGRAPH 2025. An interdisciplinary workshop exploring the intersection of drawing, cognitive science, and generative technologies.

Publicity Co-Chair, ICCV 2025

Reviewer for CVPR, ICCV, ECCV, SIGGRAPH, SIGGRAPH Asia, IEEE Transactions on Visualization and Computer Graphics (TVCG), ACM Transactions on Graphics (TOG)

MIT Face to Face, 2025. Organizer. An MIT-wide community drawing project inspired by Es Devlin, recipient of the 2025 Eugene McDermott Award in the Arts. <https://artfinity.mit.edu/event/face-to-face>

Mentor, "Meduyakot" Program, Tel Aviv University. 2022, 2024

Mentoring female master's students to promote leadership and inclusion of women in exact sciences

Mentee & Community Member, Woman2Woman, 8200 Alumni Association. 2021

Research Mentoring

I have the privilege of mentoring excellent students across institutions and degree levels, including Mia Tang (MSc student, Stanford University), Dingning Cao, Janelle Cai, Yifan Kang (MIT undergraduates), Suwan Kim (MSc student, MIT), Marco Cipriano (PhD candidate, Hasso Plattner Institute), Ellie Arar, Yarden Frenkel, Sagi Polaczek (MSc students, Tel Aviv University).

Languages Hebrew- native, English- fluent