Yael Vinker

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EDUCATION

Postdoctoral Associate, MIT CSAIL 2024–Current
Host: Prof. Antonio Torralba

Ph.D. in Computer Science 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 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

AWARDS & HONORS

EXCELLENCE AND RECOGNITION AWARDS

Rising Star in EECS, MIT, 2024 (link)

Blavatnik Prize for Outstanding PhD Students in Computer Science, 2024
Awarded to 4 PhD students annually

Outstanding Reviewer, CVPR 2025

PAPER AWARDS

Best Paper Award, ACM Transactions on Graphics (TOG), SIGGRAPH Asia 2023
Concept Decomposition for Visual Exploration and Inspiration

Honorable Mention Best Paper Award, ACM Transactions on Graphics (TOG), SIGGRAPH 2023
Word-as-Image for Semantic Typography

Best Paper Award, ACM Transactions on Graphics (TOG), SIGGRAPH 2022
CLIPasso: Semantically-Aware Object Sketching

FELLOWSHIPS & SCHOLARSHIPS

Eric and Wendy Schmidt Postdoctoral Award, 2024

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

Nominated for the Fulbright Postdoctoral Fellowship, 2024

VATAT Scholarship for Outstanding Female PhD Candidates, 2023
Awarded to 3 PhD students annually

Teaching

Lecturer, *Tel Aviv University*   Spring 2023, Spring 2024
Deep Neural Networks for Computer Graphics (0368308901)
Main lecturer. Developed the course syllabus, presentations, and managed logistics
The course had 50-60 participants yearly and received high ratings from students (6.89/7)

Teaching Assistant, *Tel Aviv University*   2022 - 2024
Seminar in Neural Networks-Based Graphics (0368371301)

Lecturer, *Reichman University*   July 2024
Generative AI and Diffusion Models Workshop
Main lecturer for 20 graduate students. Developed the course syllabus, presentations, and managed logistics

Work & Research Experience

Google Research   2022 - 2023
Student Researcher, Creative Camera team, Google TLV
Working under Dr. Yael Pritch Knaan. Researcher in the field of generative models and VLMs

École polytechnique fédérale de Lausanne (EPFL)   Summer 2021
Research Intern, Summer@EPFL, Switzerland
Supervised by Prof. Amir Zamir at VILAB (Visual Intelligence and Learning Lab)

Disney Research   Spring 2021
Research Intern, DisneyResearch|Studios, Zurich
Supervisors: Dr. Christopher Schroers and Dr. Roberto Azevedo.
Developed content-aware video compression models.

Software Engineer Intern, Google
LiveResults Proactive team, Google TLV   July 2019 - March 2020
OneGoogle team, Google TLV   Aug. 2018 - Jan. 2019

Invited Talks & Seminars

Computational Models of Line Drawings: From Perception to Synthesis
TTIC graduate course on Generative models, Art, and Perception   October 2025

AI for Visual Arts
Keynote at The 2nd AI for Visual Arts Workshop   ICCV 2025

Personalization for Creative Applications
Keynote at P13N: Personalization in Generative AI Workshop   ICCV 2025

Visual Abstraction, Symbolism, and Narrative: Lessons from Comics for AI
Keynote at COMIQ: Comic Intelligence Quotient   ICCV 2025

Synthetic Data in Creative Applications
Keynote at SynData4CV Workshop on Synthetic Data for Computer Vision   CVPR 2025

Generative Models for Visual Communication
Runway   May 2025
MIT Creative Machine Learning for Design Course   April 2025

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

Challenges and Advancements in Generative Models for Sketches
MIT Face to Face. https://artfinity.mit.edu/event/face-to-face   April 2025

Generative Models for Visual Communication
AI Vision Seminar, MIT Media Lab   November 2024
CMU BIG seminar (roBot Intelligence Group)   November 2024

COGGRAPH Workshop (link)
An interdisciplinary workshop on the intersection of cognitive science and computer graphics   July 2024

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

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

Generative Models for Creative Applications
MIT CSAIL Vision-Graphics Seminar   March 2024
MIT Media Lab   March 2024
Graphics Cafe Seminar, Stanford University   March 2024
Berkeley Computer Vision Seminar   March 2024
Google VisCAM Seminar   March 2024
Adobe Research GenTech Seminar   March 2024

Generative Models for Abstractions
Weizmann Vision and AI Seminar   January 2024

CLIPasso and Word-As-Image
Microsoft Data Science Bond   May 2023
Lightricks Research Seminar   March 2023

CLIPasso: Semantically-Aware Object Sketching
Israeli Computer Vision Day (link to recording)   January 2023

Interviews & Media Coverage

MIT CSAIL News   June 2025
"Teaching AI models the broad strokes to sketch more like humans do" (link to article)

MIT CSAIL News   June 2025
Featured my work in the EECS Rising Stars article (link to article)

Talking Papers Podcast   March 2023
Interview about CLIPasso with Itzik Ben Shabat (link to recording)

ACM SIGGRAPH Blog   November 2022
Interview about CLIPasso: "Abstraction: The Key to Semantic Sketching" (link to article)

RSIP Vision Magazine   October 2022
Featured on the cover page with a full interview about my work CLIPasso (link to article)

Academic Service

SIGGRAPH Technical Papers Committee, 2025

Workshop Co-Organizer, SIGGRAPH 2025
"Drawing and Sketching: Art, Psychology, and Computer Graphics" (https://lines-and-minds.github.io/).
An interdisciplinary workshop exploring the computational, creative, and cognitive aspects of drawings.

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 Co-Organizer, 2025
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 at the "Meduyakot" Program, Tel Aviv University 2022 - 2024
Mentored female graduate students to promote leadership and inclusion of women in exact sciences

Publications

SIGGRAPH and **SIGGRAPH Asia** are the premier venues in computer graphics. Their journal-track papers are published
in **ACM Transactions on Graphics (TOG)**, the flagship journal in the field (h5-index 114, ranked #1). **CVPR**, **ICCV**,
and **ECCV** (h5-indices of 450, 256, and 262 respectively) are the top three venues in computer vision, with CVPR ranked #1
in computer science. **NeurIPS** (h5-index 371) is ranked #1 in artificial intelligence.

[1]   Mia Tang, **Yael Vinker**, Chuan Yan, Lvmin Zhang, and Maneesh Agrawala. "Instance Segmentation of
      Scene Sketches Using Natural Image Priors". *ACM SIGGRAPH Conference Papers*. 2025.

[2]   **Yael Vinker**, Tamar Rott Shaham, Kristine Zheng, Alex Zhao, Judith E Fan, and Antonio Torralba.
      "SketchAgent: Language-Driven Sequential Sketch Generation". *Proceedings of the Computer Vision and
      Pattern Recognition Conference (CVPR)*. 2025.

[3]   Ellie Arar, Yarden Frenkel, Daniel Cohen-Or, Ariel Shamir, and **Yael Vinker**. "SwiftSketch: A
      Diffusion Model for Image-to-Vector Sketch Generation". *ACM SIGGRAPH Conference Papers*. 2025.

[4]   Sagi Polaczek, Yuval Alaluf, Elad Richardson, **Yael Vinker**, and Daniel Cohen-Or. "NeuralSVG: An
      Implicit Representation for Text-to-Vector Generation". *Proceedings of the IEEE/CVF International
      Conference on Computer Vision (ICCV)*. 2025.

[5]   Rinon Gal*, **Yael Vinker***, Yuval Alaluf, Amit Bermano, Daniel Cohen-Or, Ariel Shamir, and
      Gal Chechik. "Breathing Life Into Sketches Using Text-to-Video Priors". *Proceedings of the IEEE/CVF
      Conference on Computer Vision and Pattern Recognition (CVPR)*. 2024. *Denotes equal contribution.
      Spotlight Presentation (top 10%).

[6]   Yarden Frenkel, **Yael Vinker**, Ariel Shamir, and Daniel Cohen-Or. "Implicit Style-Content Separation
      Using B-LoRA". *Proceedings of the 18th European Conference on Computer Vision (ECCV)*. 2024.

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

[8]   Omri Avrahami, Amir Hertz, **Yael Vinker**, Moab Arar, Shlomi Fruchter, Ohad Fried, Daniel Cohen-Or, and Dani Lischinski. "The Chosen One: Consistent Characters in Text-to-Image Diffusion Models". *ACM SIGGRAPH Conference Papers*. 2024.

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

[10] Shir Iluz*, **Yael Vinker***, Amir Hertz, Daniel Berio, Daniel Cohen-Or, and Ariel Shamir. "Word-As-Image for Semantic Typography". *ACM Transactions on Graphics (TOG)*. 2023. *Denotes equal contribution. **Best Paper Honorable Mention Award**.

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

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

[13] **Yael Vinker**, Ehsan Pajouheshgar, Jessica Y. Bo, Roman Christian Bachmann, Amit Haim Bermano, Daniel Cohen-Or, Amir Zamir, and Ariel Shamir. "CLIPasso: semantically-aware object sketching". *ACM Transactions on Graphics (TOG)* (2022). **Best Paper Award**.

[14] **Yael Vinker***, Eliahu Horwitz*, Nir Zabari, and Yedid Hoshen. "Image Shape Manipulation From a Single Augmented Training Sample". *Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV)*. 2021. *Denotes equal contribution. **Oral Presentation (top 3%)**.

[15] **Yael Vinker***, Huberman-Spiegelglas Inbar, and Fattal Raanan. "Unpaired Learning for High Dynamic Range Image Tone Mapping". *Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV)*. 2021.