Alexandros Graikos

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EDUCATION

PhD in Computer Science — **Stony Brook University, Stony Brook, NY**

August 2020 – Present
Advisor: Dimitris Samaras
Expected Graduation: May 2026
Research:
• Developing methods for understanding and leveraging the rich image priors encoded in generative diffusion models.
• Applications of image priors in a medical imaging domain: from training generative models for digital histopathology to utilizing the learned priors in downstream tasks.

Diploma in Electrical and Computer Engineering — **Aristotle University of Thessaloniki, Greece**

September 2013 – November 2018
Advisor: Anastasios Delopoulos
Grade: 9.09/10
Thesis: "Single Image Depth Estimation using Generative Adversarial Networks"

RESEARCH EXPERIENCE

Research Intern — **Microsoft Research, Redmond, WA**

Summer 2021/22/23/24
Mentor: Nebojsa Jojic
• Continued and extended PhD work on image priors encoded in diffusion models.
• Applications of large-scale generative image model priors in remote sensing and gaming.

Research Assistant — **Aristotle University of Thessaloniki, Greece**

April 2019 – June 2020
PI: Leontios J. Hadjileontiadis
• Developed generative adversarial networks for monocular depth estimation in videos.
• Project presented at a human-computer interaction conference.

TEACHING EXPERIENCE

Course organization and lectures — **Stony Brook University, Stony Brook, NY**

• CSE656: Computer Vision
Organizing sessions related to generative models for images. Discussing with students and assisting with presentations on fundamentals and latest research in the field.

• CSE527: Introduction to Computer Vision
Lecture on generative models of images.

• CSE590-02: Computational Photography
Lecture on diffusion models and digital histopathology.

• CSE337: Scripting Languages, CSE215: Foundations of Computer Science
Teaching assistant.

PUBLICATIONS

2026

Generating metamers of human scene understanding
Ritik Raina, Abe Leite, Alexandros Graikos, Seoyoung Ahn, Dimitris Samaras, Greg Zelinsky
ICLR, 2026

2025

Fast constrained sampling in pre-trained diffusion models
Alexandros Graikos, Nebojsa Jojic, Dimitris Samaras
NeurIPS, 2025

Pathology image compression with pre-trained autoencoders
S. Yellapragada, Alexandros Graikos, K. Triaridis, Z. Li, T. N. Nandi, R. K. Madduri, P. Prasanna, J. Saltz, D. Samaras
MICCAI, 2025

PathSegDiff: Pathology segmentation using diffusion model representations
Sachin Kumar Danisetty, Alexandros Graikos, Srikar Yellapragada, Dimitris Samaras
MICCAI, 2025

Seen2Scene: A generative model of fixation-by-fixation scene understanding
Ritik Raina, Abe Leite, Alexandros Graikos, Seoyoung Ahn, Greg Zelinsky
CCN, 2025

ZoomLDM: Latent diffusion model for multi-scale image generation
Alexandros Graikos, S. Yellapragada, K. Triaridis, P. Prasanna, R. Gupta, J. Saltz, D. Samaras
CVPR, 2025

2024

∞-Brush: Controllable large image synthesis with diffusion models in infinite dimensions
M.Q. Le, Alexandros Graikos, S. Yellapragada, R. Gupta, J. Saltz, D. Samaras
ECCV, 2024

Diffusion-Refined VQA annotations for semi-supervised gaze following
Q. Miao, Alexandros Graikos, J. Zhang, S. Mondal, M. Hoai, D. Samaras
ECCV, 2024

Learned representation-guided diffusion models for large-image generation
Alexandros Graikos, S. Yellapragada, M.Q. Le, S. Kapse, P. Prasanna, J. Saltz, D. Samaras
CVPR, 2024

PathLDM: Text conditioned latent diffusion model for histopathology
S. Yellapragada, Alexandros Graikos, P. Prasanna, T. Kurc, J. Saltz, Dimitris Samaras
WACV, 2024

2023

GFlowNet-EM for learning compositional latent variable models
E. J. Hu, N. Malkin, M. Jain, K. E. Everett, Alexandros Graikos, Y. Bengio
ICML, 2023

Conditional generation from unconditional diffusion models using denoiser representations
Alexandros Graikos, Srikar Yellapragada, Dimitris Samaras
BMVC, 2023

S-VolSDF: Sparse multi-view stereo regularization of neural implicit surfaces
Haoyu Wu, Alexandros Graikos, Dimitris Samaras
ICCV, 2023

2022

Diffusion models as plug-and-play priors
Alexandros Graikos, Nikolay Malkin, Nebojsa Jojic, Dimitris Samaras
NeurIPS, 2022

Resolving label uncertainty with implicit posterior models
E. Rolf, N. Malkin, Alexandros Graikos, A. Jojic, C. Robinson, N. Jojic
UAI, 2022

2020

Single image-based food volume estimation using monocular depth-prediction networks
Alexandros Graikos, V. Charisis, D. Iakovakis, S. Hadjidimitriou, L. J. Hadjileontiadis
HCI International, 2020

PREPRINTS

Mitigating Diffusion Model Hallucinations with Dynamic Guidance
K. Triaridis, Alexandros Graikos, A. Chatziagapi, G. G. Chrysos, D. Samaras
arXiv preprint, 2025

PixCell: A generative foundation model for digital histopathology images
Alexandros Graikos, S. Yellapragada, Z. Li, K. Triaridis, V. Belagali, S. Kapse, T. N. Nandi, R. K Madduri, P. Prasanna, T. Kurc, R. R Gupta, J. Saltz, D. Samaras
arXiv preprint, 2025

Gen-sis: Generative self-augmentation improves self-supervised learning
V. Belagali, S. Yellapragada, Alexandros Graikos, S. Kapse, Z. Li, T. N. Nandi, R. K Madduri, P. Prasanna, J. Saltz, D. Samaras
arXiv preprint, 2024