Rameen **Abdal**

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RameenAbdal

Education and Training

Stanford University — *Palo Alto, USA*

Postdoctoral Fellow at Stanford Computational Imaging Lab — *June. 2023 - April. 2024*

King Abdullah University of Science and Technology (KAUST) — *Thuwal, Saudi Arabia*

MS/PhD Computer Science (**GPA: 3.93/4.00**) — *MS: Sept. 2018 - June. 2020; Ph.D.: June. 2020 - Feb. 2023*

National Institute of Technology (NIT) Srinagar — *Srinagar, India*

B.tech in Electronics and Communication Engineering (**CGPA : 9.137/10 | Overall Rank: 2nd**) — *Aug. 2014 - June 2018*

Relevant Experience

Snap Inc. — *Palo Alto, USA*

Research Scientist — *Sept 2024 - present*

Working on Image and Video Personalization. Encoding identities, motions and micro-expressions from videos to generate personalized content.

Snap Inc. — *Los Angeles, USA*

Research Intern — *June 2022 - Oct. 2022*

Worked on a project titled 3DAvatarGAN. The proposed method converts a single image into a desired personalized 3D avatar that is animatable. The project is published at CVPR 2023.

Adobe Research — *London, UK*

Remote Collaborator — *March 2020 - May 2022*

Worked on a project titled StyleFlow. The proposed image editing software can semantically edit an image. GAN-generated images are supported. The project is published at TOG 2021.

Indian Institute Of Science (IISc) Bangalore — *Bangalore, India*

Computer Vision Research Intern — *Nov. 2016 - Feb. 2017*

Worked on a project that segments roads for UAV-captured images with high fidelity. The work is published at JARS.

Patents and Deployments

- **US Patent (Patent pending): "AVATAR GENERATION ACCORDING TO ARTISTIC STYLES".**
  Inventors : Rameen Abdal, Menglei Chai, Hsin-Ying Lee, Aliaksandr Siarohin, Sergey Tulyakov, Peihao Zhu
- **US Patent (US 16934858): "ATTRIBUTE CONDITIONED IMAGE GENERATION".**
  Inventors : Rameen Abdal, Peter Wonka, Niloy Mitra, Piehao Zhu

Talks

Stanford Computational Imaging Lab — *Stanford, USA (Remote)*

Extracting Semantics, Geometry, and Appearance using GANs — *Dec. 2022*

Rising Stars in AI Symposium (organized by Jurgen Schmidhuber) — *KAUST, Saudi Arabia*

Extracting Semantics, Geometry, and Appearance using GANs — *March 2022*

Adobe Research — *San Jose, USA (Remote)*

Extracting Semantics, Geometry, and Appearance using StyleGAN — *Feb. 2022*

Achievements

Winner — *KAUST, Saudi Arabia*
KAUST Research Excellence Award — *Nov. 2021*

Winner — *KAUST, Saudi Arabia*
KAUST CEMSE Dean's List Award — *June 2022*

Publications

- Amil Dravid, Yossi Gandelsman, Kuan-Chieh Wang, **Rameen Abdal**, Gordon Wetzstein, Alexei A. Efros, Kfir Aberman
  "Interpreting the Weight Space of Customized Diffusion Models"
  NeurIPS 2024 [Paper] [Project Page]

- **Rameen Abdal***, Wang Yifan*, Zifan Shi*, Yinghao Xu, Ryan Po, Zhengfei Kuang, Qifeng Chen, Dit-Yan Yeung, and Gordon Wetzstein
  "Gaussian Shell Maps for Efficient 3D Human Generation"
  IEEE/CVF CVPR 2024 [Paper] [Project Page]

- **Rameen Abdal**, Hsin-Ying Lee, Peihao Zhu, Menglei Chai, Aliaksandr Siarohin, Peter Wonka, and Sergey Tulyakov
  "3DAvatarGAN: Bridging Domains for Personalized Editable Avatars"
  IEEE/CVF CVPR 2023 [Paper] [Project Page]

- **Rameen Abdal**, Peihao Zhu, Niloy Mitra, Peter Wonka
  "Video2StyleGAN: Disentangling Local and Global Variations in a Video" arXiv 2022 [Paper] [Video]

- Peihao Zhu, **Rameen Abdal**, John Femiani, Peter Wonka
  "HairNet: Hairstyle Transfer with Pose Changes"
  ECCV 2022 [Paper] [Video]

- **Rameen Abdal**, Peihao Zhu, John Femiani, Niloy Mitra, Peter Wonka
  "CLIP2StyleGAN: Unsupervised Extraction of StyleGAN Edit Directions"
  ACM SIGGRAPH 2022 [Paper] [Video]

- Peihao Zhu, **Rameen Abdal** , John Femiani, Peter Wonka
  "Mind the Gap: Domain Gap Control for Single Shot Domain Adaptation for Generative Adversarial Networks"
  ICLR 2022 [Paper] [Video]

- Peihao Zhu, **Rameen Abdal** , John Femiani, Peter Wonka
  "Barbershop: GAN-based Image Compositing using Segmentation Masks"
  ACM SIGGRAPH Asia 2021 [Paper] [Project Page] [Video] [Media Attention]

- **Rameen Abdal**, Peihao Zhu, Niloy Mitra, Peter Wonka
  "Labels4Free: Unsupervised Segmentation using StyleGAN"
  IEEE/CVF ICCV 2021 [Paper] [Project Page]

- Peihao Zhu, **Rameen Abdal**, John Femiani, Yipeng Qin, Peter Wonka
  "Improved StyleGAN Embedding: Where are the Good Latents?" arXiv 2020 [Paper] [Video]

- **Rameen Abdal**, Peihao Zhu, Niloy Mitra, Peter Wonka
  "StyleFlow: Attribute-conditioned Exploration of StyleGAN-Generated Images using Conditional Continuous Normalizing Flows"
  ACM TOG (**ACM SIGGRAPH 2021**) [Paper] [Project Page] [Video] [Media Attention]

- **Rameen Abdal**, Yipeng Qin, Peter Wonka
  "Image2StyleGAN++: How to Edit the Embedded Images?"
  IEEE/CVF CVPR 2020. [Paper] [Video]

- Peihao Zhu, **Rameen Abdal**, Yipeng Qin, Peter Wonka
  "SEAN: Image Synthesis with Semantic Region-Adaptive Normalization"
  IEEE/CVF CVPR 2020 [Oral (top 5.7% of the total submissions)]. [Paper] [Video]

- **Rameen Abdal**, Yipeng Qin, Peter Wonka
  "Image2StyleGAN: How to Embed Images Into the StyleGAN Latent Space?"
  IEEE/CVF ICCV 2019 [Oral (top 4.3% of the total submissions)]. [Paper] [Oral Video]

Position of Responsibility

Teaching Assistant

KAUST, Saudi Arabia

Deep Learning for Visual Computing (CS 390DD/ CS 323)

Fall 2019, 2020, 2021

Reviewer & Program Chair (PC)

EuroGraphics 24 (PC) | ICML 24 | TOG | TVCG | TPAMI | AAAI 22-24 | Neurips 23 | ICLR 24 | CVPR 21-23 | ICCV 21/23 | ECCV 22 | SIGGRAPH 21 - 24 | SIGGRAPH ASIA 21-23

2020, 2021, 2022, 2023, 2024