# Rameen **Abdal**

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## **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

 $\mathsf{MS/PhD}\ \mathsf{Computer}\ \mathsf{Science}\ (\mathbf{GPA:3.93/4.00})$ 

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.

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

Feb. 2022

Adobe Research San Jose, USA (Remote)

Extracting Semantics, Geometry, and Appearance using StyleGAN

### Achievements

Winner KAUST, Saudi Arabia

KAUST RESEARCH EXCELLENCE AWARD

Winner KAUST, Saudi Arabia

KAUST CEMSE DEAN'S LIST AWARD

June 2022

Nov. 2021

## **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**

DEEP LEARNING FOR VISUAL COMPUTING (CS 390DD/ CS 323)

KAUST, Saudi Arabia 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