# Peihao Zhu

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## Work Experience

**Seed Team, ByteDance** — San Jose, CA
*Senior Research Scientist* — *Sep 2024 - present*

**Seed Team, ByteDance** — San Jose, CA
*Research Scientist* — *Jul 2023 - Aug 2024*

**Reality Lab, Meta** — Burlingame, CA
*Research Scientist Intern* — *Oct 2022 - Feb 2023*

**Creative Vision Lab, Snap** — Los Angeles, CA
*Research Scientist Intern* — *May 2022 - Sep 2022*

## Education

**King Abdullah University of Science and Technology (KAUST)** — Kingdom of Saudi Arabia
*PhD in Computer Science* — *Dec 2019 - Jun 2023*

**King Abdullah University of Science and Technology (KAUST)** — Kingdom of Saudi Arabia
*Master of Science in Computer Science* — *Aug 2017 - Dec 2019*

**Institute of Automation, Chinese Academy of Sciences** — China
*Master candidate in Computer Science* — *Sep 2016 - Jul 2017*

**Northeastern University** — China
*Bachelor of Technology in Automation; GPA: 90.0/100; Rank: top 5%* — *Aug 2012 - Jun 2016*

## Projects

**ByteDance Video Generation Foundation Model - Unicorn (Development Phase)**
*ByteDance Seed Team: PixelDance × Seaweed (Dec 2024 - present)*

**ByteDance Video Generation Foundation Model - Seaweed**
*ByteDance Seed Team (Mar 2024 - Nov 2024)* [Paper] [Video] [Website]

**Tiktok AI-moji**
*Virtual Avatar Team (Jul 2023 - Dec 2024)* [Blog] [Platform]

## Publications

**Seaweed-7B: Cost-Effective Training of Video Generation Foundation Model**
ByteDance Seed
*Technical Report, 2025* [Paper] [Webpage]

**3DAvatarGAN: Bridging Domains for Personalized Editable Avatars**
Rameen Abdal, Hsin-Ying Lee, Peihao Zhu, Menglei Chai, Aliaksandr Siarohin, Peter Wonka, Sergey Tulyakov
*Proc. IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2023* [Paper] [Webpage]

**HairNet: Hairstyle Transfer with Pose Changes**
Peihao Zhu, Rameen Abdal, John Femiani, Peter Wonka
*Proc. European Conference on Computer Vision (ECCV), 2022* [Paper] [Webpage]

**CLIP2StyleGAN: Unsupervised Extraction of StyleGAN Edit Directions**
Rameen Abdal, Peihao Zhu, John Femiani, Niloy Mitra, Peter Wonka
*SIGGRAPH Conference Proceedings, 2022* [Paper] [Webpage]

**Mind the Gap: Domain Gap Control for Single Shot Domain Adaptation for Generative Adversarial Networks**
Peihao Zhu, Rameen Abdal, John Femiani, Peter Wonka
*International Conference on Learning Representations (ICLR), 2022* [Paper] [Webpage]

**Barbershop: GAN-based Image Compositing using Segmentation Masks**
Peihao Zhu, Rameen Abdal, John Femiani, Peter Wonka
*ACM Transactions on Graphics (Proc. SIGGRAPH Asia), 2021* [Paper] [Webpage]

**Improved StyleGAN Embedding: Where are the Good Latents?**
Peihao Zhu, Rameen Abdal, Yipeng Qin, John Femiani, Peter Wonka
*ArXiv pre-print, 2021* [Paper] [Webpage]

**Styleflow: Attribute-conditioned exploration of stylegan-generated images using conditional continuous normalizing flows**
Rameen Abdal, Peihao Zhu, Niloy Mitra, Peter Wonka
*ACM Transactions on Graphics (TOG), 2021* [Paper] [Webpage]

**Labels4Free: Unsupervised Segmentation using StyleGAN**
Rameen Abdal, Peihao Zhu, Niloy J. Mitra, Peter Wonka
*Proc. IEEE International Conference on Computer Vision (ICCV), 2021* [Paper] [Webpage]

**Flow-Guided Video Inpainting with Scene Templates**
Dong Lao, Peihao Zhu, Peter Wonka, Ganesh Sundaramoorthi
*Proc. IEEE International Conference on Computer Vision (ICCV), 2021* [Paper] [Webpage]

**SEAN: Image Synthesis with Semantic Region-Adaptive Normalization**
Peihao Zhu, Rameen Abdal, Yipeng Qin, Peter Wonka
*Proc. IEEE Conference on Computer Vision and Pattern Recognition (CVPR **Oral**), 2020* [Paper] [Webpage]

**Large Scale Architecture Asset Extraction from Panoramic Imagery**
Peihao Zhu, Wamiq Reyaz Para, Anna Fruehstueck, John Femiani, Peter Wonka
*IEEE Transactions on Visualization and Computer Graphics (TVCG), 2020* [Paper] [Webpage]

## Award & Achievements

- **KAUST CEMSE Dean's List Award** *2021-2022*
- **National Scholarship** *2013*
- KAUST Fellowship *2017*
- UCAS Scholarship *2016*
- Scholarship for Outstanding Merits *2012-2016*

## Scientific Referees

**Prof. Peter Wonka**
Full Professor, Visual Computing Center, KAUST
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http://peterwonka.net