

Yichen Peng 🤖



Education 🏛️

Japan Advanced Institute of Science and Technology, Nomi, Ishikawa

Ph.D. Candidate in Information Science 2021.4 - 2024.3

- Research Focus: Machine Learning, Human Computer Interaction, Computer Vision, Computer Graphics
- Dissertation Title: Ambiguous-to-Concrete Realistic Human Image Synthetic via Generative Model
- Supervisor: *Kazunori Miyata*

Japan Advanced Institute of Science and Technology, Nomi, Ishikawa

Master's Degree in Knowledge Science 2018.10 - 2021.3

- Thesis Title: Sketch2Motion: Sketch-Based Interface for Human Motions Retrieval and Character Animation
- Supervisor: *Kazunori Miyata*

Guangdong University of Technology (GDUT) & Vellore Institute of Technology (VIT)

B.A. & B.S. (Dual Degree) in Animation 2013.9 - 2017.6

- Affiliation: School of Art & Design (GDUT) & School of Information Technology & Engineering (VIT)
- CGPA: 3.31/4.00

Research Experience 🧑💻

Tokyo Institute of Technology, Research Assistant Professor, Tokyo Japan 2024.10 - Present

- Affiliation: Koike Lab
- Projects Related: Human Computer Interaction, AI Sports Training, Generative Models
- Advisor: Hideki Koike

Tokyo Institute of Technology, Postdoctoral Fellow, Tokyo Japan 2024.04 - 2024.10

- Affiliation: Koike Lab
- Projects Related: Human Computer Interaction, AI Sports Training, Generative Models
- Advisor: Hideki Koike

HUAWEI Japan K.K. Tokyo Research Center, Research Internship, Tokyo Japan 2021.10 - 2024.03

- Affiliation: Tokyo CG Lab
- Projects Related: 2D&3D Facial Animation Driven, Audio2Gesture, Face Swapping
- Advisor: co-advised by *Erwin Wu*, *Naoya Iwamoto* and *Bo Zheng*.

Sketch-Based Interface for Deep Learning, Research Assistant, JAIST & Wasada 2020.04 - Present

- Projects Related: Sketch-Based Interface, Creative Assistant
- Advisor: co-advised by *Haoran Xie*, *Tsukasa Fukusato* and *Kazunori Miyata*.

Japan advanced Institute of Science and Technology, Teaching Assistant 2020 - 2022

- Lecture: Media Creation, Innovation Design

Publications

Phantom Audition: Using the Visualization of Electromyography and Vocal Metrics as Tools in Singing Training, SA 2024 (Poster)

Ruofan Liu, **Yichen Peng**, Takanori Oku, Erwin Wu, Shinichi Furuya, and Hideki Koike. *the SIGGRAPH Asia 2024*

Phantom Audition: Using the Visualization of Electromyography and Vocal Metrics as Tools in Singing Training, SA 2024 (Poster)

Kanyu Chen, Emiko Kamiyama, Ruiteng Li, **Yichen Peng**, Daichi Saito, Erwin Wu, Hideki Koike, and Akira Kato. *the SIGGRAPH Asia 2024*

Dual-Modal 3D Human Pose Estimation using Insole Foot Pressure Sensors, ISMAR 2024 (Workshop)

Erwin Wu, **Yichen Peng**, Rawal Khirodkar, Hideki Koike, and Kris Kitani. *2024 IEEE International Symposium on Mixed and Augmented Reality Adjunct*

Sketch-Guided Latent Diffusion Model for High-Fidelity Face Image Synthesis, IEEE Access

Yichen Peng, Chunqi Zhao, Tsukasa Fukusato, Haoran Xie, and Kazunori Miyata. *IEEE Access*

EMAGE: Towards Unified Holistic Co-Speech Gesture Generation via Mask Audio Gesture Modeling, CVPR 2024

Haiyang Liu, Zihao Zhu, Giorgio Becherini, **Yichen Peng**, Mingyang Su, You Zhou, Xuefei Zhe, Naoya Iwamoto, Bo Zheng, and Michael J. Black. *The IEEE/CVF Conference on Computer Vision and Pattern Recognition 2024*

DualMotion: Global-to-Local Casual Motion Design for Character Animations, IEICE

Yichen Peng, Chunqi Zhao, Tsukasa Fukusato, Haoran Xie, Kazunori Miyata and Takeo Igarashi. *IEICE TRANSACTIONS on Information and Systems* 106 (4), 459-468

Beat: A large-scale semantic and emotional multi-modal dataset for conversational gestures synthesis, ECCV 2022

Haiyang Liu, Zihao Zhu, Naoya Iwamoto, Yichen Peng, Zhengqi Li, You Zhou, Elif Bozhurt, and Bo Zheng. *European Conference on Computer Vision*, 612-630

Two-Stage Motion Editing Interface for Character Animation, SCA 2021

Yichen Peng*, Chunqi Zhao*, Zhengyu Huang, Tsukasa Fukusato, Haoran Xie, and Kazunori Miyata. *SCA '21: The ACM SIGGRAPH / Eurographics Symposium on Computer Animation*

dualFace: Two-Stage Drawing Guidance for Freehand Portrait Sketching, CVM 2021

Zhengyu Huang, Yichen Peng, Tomohiro Hibino, Chunqi Zhao, Haoran Xie, Tsukasa Fukusato, and Kazunori Miyata. *Computational Visual Media* 8, 63-77 (Special issue of CVM2021)

Sketch2Domino: Interactive Chain Reaction Design and Guidance, NICOGRAPH International 2020

Yichen Peng, Yuki Mishima, Yamato Igarashi, Ryoma Miyauchi, Masahiro Okawa, Haoran Xie and Kazunori Miyata. (Best Paper Award) (Best Online Presentation Award (Paper)) *NICOGRAPH International 2020*

BalloonFAB: Digital Fabrication of Large-Scale Balloon Art, CHI 2019

Haoran Xie, Yichen Peng, Naiyun Chen, Dazhao Xie, Chia-Ming Chang, and Kazunori Miyata. *ACM SIGCHI 2019*

Academic Services

- Invited Talk: To Visual Computing 2022, Kotyo, Japan, 2022.10.
- Invited Talk: To CGVI, Tokyo, Japan (online), 2021.11.
- Invited Talk: To Silicon Valley ACM SIGGRAPH, Los Angeles, US (online), 2021.10.

Honors & Scholarships

- Doctoral Research Fellow (DRF) Special adoption JAIST, 2021.04 - 2024.03
- JAIST-SPRING Doctoral Fellow (JST 次世代特別研究員) JAIST, 2021.10 - 2024.03
- Excellent Student Award (映像情報メディア学会北陸支部優秀学生賞) ITE, 2021.03

Skills

- Programming Language: Python, C/C++, Java, Javascript, Processing
- Framework: Pytorch, TensorFlow, OpenCV, Qt, gradio, diffuser

Interests and Hobbies

- Outdoorsing, Skiing&Snowboarding, Piano&Guitar

Languages

English (*TOEIC 850*), Japanese (*JLPT N1*), - Cantonese & Chinese (*Bi-lingual*)

Contact Information

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- **Google Scholar:** <https://scholar.google.com/citations?user=9sWVrREAAAJ&hl=en>
- **Personal Website:** <https://sites.google.com/view/yichen-peng/home>