Yizhang Chen (陈益漳) – Curriculum Vitae

Address	Graduate School of Arts and Sciences University of Tokyo, Tokyo, Japan	**Nationality**	Chinese
Email	chenyzh@g.ecc.u-tokyo.ac.jp	**Languages**	Chinese (Native), Japanese, English (TOEIC L&R: 880, March 2025)
Phone	+81-80-3204-5062	**GitHub**	github.com/watashihame
		Homepage	mecyz.cc

Education

Apr. 2024 - Present Graduate School of Arts and Sciences, University of Tokyo, Japan
PhD, Multidisciplinary Sciences General Systems Studies

Advisor: Prof. Takashi Kanai (Kanai Laboratory)
Research: Computer Graphics, Fluid Animation Editing, Neural 3D Reconstruction

Apr. 2022 - Mar. 2024 Graduate School of Arts and Sciences, University of Tokyo, Japan
Master, Multidisciplinary Sciences General Systems Studies

Advisor: Prof. Takashi Kanai (Kanai Laboratory)
Thesis: Physics Informed Voxel Radiance Field in Smoke Reconstruction

Sep. 2017 - Jun. 2021 ShanghaiTech University, China
Bachelor of Science, Computer Science and Technology

Research Experience

Apr. 2024 - Present Graduate School of Arts and Sciences, University of Tokyo
3D Fluid Editing

I develop methods for editing precomputed fluid animations. My published work uses vector potential editing to preserve divergence-free flow around newly inserted obstacles. I also explore VAEs and conditional latent diffusion models for controllable fluid generation.

Apr. 2022 - Mar. 2024 Graduate School of Arts and Sciences, University of Tokyo
Physics Informed Neural 3D Reconstruction for Smoke

Developed neural reconstruction methods for fluid phenomena; automated data generation and rendering using Python-based Blender pipelines; implemented real-time volume rendering with GPU acceleration.

Publications

2026 **Yizhang Chen**, Takashi Kanai: "Obstacle-Aware Fluid Control via Vector Potential Editing,"
Computer Animation and Virtual Worlds, Vol. 37, Issue 3
(CASAXR26 Special Issue), Article e70131, May/June 2026.
doi: 10.1002/cav.70131.

2024 **陳益漳**, 金井崇: "物理情報に基づくボクセル輝度場を用いた煙の動きの再構築,"
Visual Computing 2024, 東京, 9 月, No.1, 2024.

2021 G. Sun, X. Chen, **Y. Chen**, A. Pang, P. Lin, Y. Jiang, L. Xu, J. Yu, J. Wang:
"Neural Free-Viewpoint Performance Rendering under Complex Human-Object Interactions,"
Proceedings of the 29th ACM International Conference on Multimedia,
pp. 4651–4660, 2021.

Awards

2024 Visual Computing 2024 学生発表賞
陳益漳, 金井崇: " 物理情報に基づくボクセル輝度場を用いた煙の動きの再構築", 東京, 9 月, 2024.

Technical Skills

- **Programming & Development**

  Languages: Python, C++, C#, CUDA, GLSL
  Frameworks: PyTorch, JAX, NumPy, SciPy, Matplotlib, OpenCV, Unity3D, OpenGL
  Tools: Git, Linux, JupyterHub, Docker

- **3D Graphics & Visualization**

  Blender: 3D fluid visualization, volume rendering, Python API automation, VDB data conversion, custom plugin development, workflow scripting, material setup
  OpenGL: real-time volume rendering

Professional Experience

Apr. 2023 - Present University of Tokyo
Teaching Assistant
Answering student questions and grading assignments for algorithm courses.

2021.06 - 2022.03 Rhythmo (Chinese Startup)
iOS Motion Capture Application Developer
Developed "Rhylive" motion capture app using Unity3D; implemented IK systems for real-time character animation.

Sep. 2018 - Sep. 2020 Shanghai Baixi Management Company
System Development Intern
Developed data models and information management systems for financial management platform.

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