

Zhiyang (Frank) Dou

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Bio. I am a Ph.D. candidate in Computer Graphics and Computer Vision Group at the *University of Hong Kong*, supervised by *Prof. Wenping Wang* and *Prof. Taku Komura*. I received my B. Eng. degree with honors at *Shandong University*. My undergraduate research advisor is *Prof. Shiqing Xin*.

I am currently a visiting scholar in the Department of Computer and Information Science at the *University of Pennsylvania*.

Research interests : Character Animation, Geometric Modeling and Processing, Computer Graphics, Human Behavior Analysis.

Education

Aug 2020 – Present Ph.D. in Computer Graphics, Computer Science, *The University of Hong Kong*.

Sep 2016 – June 2020 B.Eng in Computer Science Honours, Computer Science (Elite Program), *Shandong University*.

Research Work

> E-ASE : Conditional Adversarial Skill Embeddings for Elite Physics-based Characters

Zhiyang Dou, Xuelin Chen, Qingnan Fan, Taku Komura, Wenping Wang.

SIGGRAPH Asia 2023.

[Project Page][Paper][Video]

> TORE : Token Reduction for Efficient Human Mesh Recovery with Transformer

Zhiyang Dou*, Qingxuan Wu*, Cheng Lin, Zeyu Cao, Qiangqiang Wu, Weilin Wan, Taku Komura, Wenping Wang.

IEEE International Conference on Computer Vision (ICCV) 2023.

[Project Page][Paper]

> Globally Consistent Normal Orientation for Point Clouds by Regularizing the Winding-Number Field

Rui Xu, Zhiyang Dou, Ningna Wang, Shiqing Xin, Xiaohu Guo, Wenping Wang.

ACM Transactions on Graphics. SIGGRAPH 2023.

SIGGRAPH 2023 Best Paper Award.

[Project Page][Code]

> RFEPS : Reconstructing a Feature-line Equipped Polygonal Surface from Unoriented Point Cloud

Rui Xu, Zixiong Wang, Zhiyang Dou, Chen Zong, Shiqing Xin, Mingyan Jiang, Changhe Tu.

ACM Transactions on Graphics. SIGGRAPH Asia 2022.

[Project Page][Code]

> Coverage Axis : Inner Point Selection for 3D Shape Skeletonization

Zhiyang Dou, Cheng Lin, Rui Xu, Lei Yang, Shiqing Xin, Taku Komura, Wenping Wang.

Computer Graphics Forum. EUROGRAPHICS 2022.

Fast-Forward Attendees Award, 2nd Place.

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> Student close contact behavior and COVID-19 transmission in China's classrooms

Yong Guo*, Zhiyang Dou*, Nan Zhang, Xiyue Liu, Boni Su, Yuguo Li, Yiping Zhang.

PNAS Nexus, 2023.

Featured in a press release by EurekAlert.

[Project Page][Paper][Press Release]

> Close Contact Behaviors of University and School Students in 10 Typical Indoor Environments

Nan Zhang, Li Liu, Zhiyang Dou, Xiyue Liu, Xueze Yang, Yong Guo, Silan Gu, Yuguo Li, Hua Qian, Jianjian Wei.

Journal of Hazardous Materials (JHM), IF=14.2, 2023.

> Real Close Contact Behavior-based COVID-19 Transmission and Interventions in Subway

Xiyue Liu*, Zhiyang Dou*, Lei Wang, Boni Su, Tianyi Jin, Yong Guo, Jianjian Wei, Nan Zhang.

Journal of Hazardous Materials (JHM), IF=14.2, 2022.

> Top-Down Shape Abstraction Based on Greedy Pole Selection

Zhiyang Dou, Shiqing Xin, Rui Xu, Jian Xu, Yuanfeng Zhou, Shuangmin Chen, Wenping Wang, Xiuyang Zhao, Changhe Tu.

IEEE Transactions on Visualization and Computer Graphics (TVCG), 2021.

*Equal contribution

Research Experience

> Jul. 2023 - Nov. 2023 Research Intern, *Tencent Games*.

- > Jun. 2023 - Jul. 2023 Visiting Scholar, [Beijing University of Technology \(BJUT\)](#).
- > Apr. 2022 - Jun. 2023 Research Intern, [Tencent AI Lab](#).
- > Jul. 2019 - Oct. 2019 Research Assistant, [The University of Hong Kong](#).
- > Mar. 2018 - Jun. 2019 Research Assistant (part-time), [Interdisciplinary Research Center \(IRC\)](#).

Scholarships

- > Oct 2020 **Postgraduate Scholarship**.
- > Oct 2019 **National Scholarship** (0.2%).
- > Oct 2018 **National Scholarship** (0.2%).
- > Dec 2018 **Presidential Scholarship** (top 30 at the University).

Patents & Competitions

- > [Patent] Method, Device and Process for Physics-based Motion Generation, 2023, Under Review.
- > [Patent] Method, Device and Process for Hand-to-Surface Contact Detection, 2023, Under Review.
- > [Patent] Method, Device and Process for Social Distancing, 2020, [Patent CN202110334126](#).
- > Meritorious Winner, [International Mathematical Modeling Contest : MCM](#), 2019.
- > Meritorious Winner, [International Mathematical Modeling Contest : ICM](#), 2018.
- > National First Prize (1%), [National Collegiate Mathematical Modeling Contest](#), 2019.
- > National First Prize, Best Paper (8/38573), [National Collegiate Mathematical Modeling Contest](#), 2018.

Services

- > Reviewer Services : TVCG; ICCV; CVPR; GM, CAD (CADJ); CGI; ICONIP; FSDM; MLIS.
- > 2023 - 2024 Teaching Assistant of COMP3271 Computer Graphics.
- > 2022 - 2023 Teaching Assistant of COMP3362 Hands-on AI : Experimentation and Applications.
- > 2021 - 2022 Teaching Assistant of COMP3362 Hands-on AI : Experimentation and Applications.
- > 2020 - 2021 Teaching Assistant of COMP2120 Computer organization.
- > 2021 - 2022 Junior Resident Tutor at [Graduate House](#).
- > 2018 - 2019 Co-founder of Open Interest Lab (IPLab) at SDU (By 2022, we have more than 120 members).

Student Mentorship Experience

(Sorted alphabetically by last name)

- > Jamie Zeyu Cao, University of Cambridge (B.A), University of Cambridge (MSC).
- > Zexin Lin, The Chinese University of Hong Kong, Shenzhen (B.Eng).
- > Xiyue Liu, Beijing University of Technology (B.Eng), Beijing University of Technology (M.Eng).
- > Peter Qingxuan Wu, University of Oxford (B.A), University of Pennsylvania (MSC).
- > Rui Xu, Shandong University (B.Eng), Shandong University (M.Eng).
- > Zhengming Yu, South China University of Technology (B.Eng), Texas A&M University (Ph.D).
- > Wenyang Zhou, University of Cambridge (B.A).