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

> **Wonder3D : Single Image to 3D using Cross-Domain Diffusion**
> Xiaoxiao Long*, Yuanchen Guo*, Cheng Lin, Yuan Liu, **Zhiyang Dou**, Lingjie Liu, Yuexin Ma, Song-Hai Zhang, Marc Habermann, Christian Theobalt, Wenping Wang.
> **Arxiv 2023.**
> [Project Page][Paper][Code]

> **C·ASE : Learning Conditional Adversarial Skill Embeddings for 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.
> [Project Page][Code]

> **Popularization of High-Speed Railway Reduces the Infection Risk via Close Contact Route during Journey**
> Nan Zhang, Xiyue Liu, Shuyi Gao, Boni Su, **Zhiyang Dou**#.
> **Sustainable Cities and Society (SCS), IF=11.7, 2023.** #Corresponding Author.

> **Student close contact behavior and COVID-19 transmission in China's classrooms**
> Yong Guo*, **Zhiyang Dou***, Nan Zhang, Xiyue Liu, Boni Su, Yuguo Li, Yinping 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 ; TIP ; 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).