

MIANLUN ZHENG

CS Department, USC ◇ Los Angeles, CA 90089 USA

◇ mianlunz@usc.edu ◇ Webpage: <https://zhengmianlun.github.io>

EDUCATION

University of Southern California, Los Angeles, USA *August 2018 - Present*
Ph.D candidate in Computer Graphics, GPA: 4.0/4.0
Advisor: Professor Jernej Barbic

Wuhan University, Wuhan, China *September 2015 - June 2018*
Master in Computer Science, GPA: 3.81/4.0
Advisor: Professor Zhiyong Yuan

Wuhan University, Wuhan, China *September 2011 - June 2015*
Bachelor in Computer Science, GPA: 3.69/4.0

PUBLICATIONS

Mianlun Zheng, Bohan Wang, Jingtao Huang, Jernej Barbic. **Simulation of Hand Anatomy Using Medical Imaging**, accepted by SIGGRAPH Asia 2022.

Shihan Lu, Mianlun Zheng, Matthew C. Fontaine, Stefanos Nikolaidis, Heather Culbertson. **Preference-Driven Texture Modeling Through Interactive Generation and Search**, IEEE Transactions on Haptics, doi: 10.1109/TOH.2022.3173935.

Mianlun Zheng, Yi Zhou, Duygu Ceylan, Jernej Barbic. **A Deep Emulator for Secondary Motion of 3D Characters**, CVPR, 2021. (Oral Presentation)

Bohan Wang*, Mianlun Zheng*, Jernej Barbic. **Adjustable Constrained Soft-Tissue Dynamics**, Pacific Graphics 2020 and Computer Graphics Forum, 39(7), 2020. (*equal first authors) (Best paper award of both PG2020 and PG2021).

Mianlun Zheng, Danyong Zhao, Jernej Barbic. **Evaluating the Efficiency of Six-DoF Haptic Rendering-Based Virtual Assembly Training**, IEEE Transactions on Haptics, 2020, 14(1): 212-224.

Qianqian Tong, Zhiyong Yuan, Xiangyun Liao, Mianlun Zheng, Tianchen Yuan, Jianhui Zhao. **Magnetic Levitation Haptic Augmentation for Virtual Tissue Stiffness Perception**. IEEE Transactions on Visualization and Computer Graphics, 2018, 24(12): 3123-3136.

Mianlun Zheng, Zhiyong Yuan, Qianqian Tong, Guian Zhang, Weixu Zhu. **A Novel Unconditionally Stable Explicit Integration Method for Finite Element Method**. Visual Computer, 2018, 34(5):721-733.

Mianlun Zheng, Zhiyong Yuan, Weixu Zhu, Guian Zhang. **A Fast Mass Spring Model Solver for High-resolution Elastic Objects**. Simulation: Transactions of the Society for Modeling and Simulation International, 2017, 93(10): 797-807.

Qianqian Tong, Zhiyong Yuan, Xiangyun Liao, Mianlun Zheng, Weixu Zhu, Guian Zhang, Munan Ning. **A joint multi-scale convolutional network for fully automatic segmentation of the left ventricle**. IEEE International Conference on Image Processing (ICIP), 2017.

Qianqian Tong, Zhiyong Yuan, Mianlun Zheng, Xiangyun Liao, Weixu Zhu, Guian Zhang. **A novel nonlinear parameter estimation method of soft tissues**. Genomics, proteomics & bioinformatics 15.6 (2017): 371-380.

Qianqian Tong, Zhiyong Yuan, Mianlun Zheng, Weixu Zhu, Guian Zhang, Xiangyun Liao. **A Novel Magnetic Levitation Haptic Device for Augmentation of Tissue Stiffness Perception**. Proceedings of the 22nd ACM Conference on Virtual Reality Software and Technology. ACM, 2016: 143-152. (Best student paper award).

PATENTS

Interactive Texture Generation and Search System Driven by Human Preference. United States Provisional Patent Application No. 63/184,659, filed 05/06/2021, pending.

Generating Realistic Animations for Digital Animation Characters Utilizing a Generative Adversarial Network and A Hip Motion Prediction Network. US Patent, filed 07/25/2019, pending.

A Real-time GPU Accelerated Hybrid Particle Blood Flow-blood Vessel Coupling Method.Chinese Patent, No. CN104462830A.

EXPERIENCE

Meta Reality Labs, Pittsburgh, USA *May 2022 - August 2022*
Research intern

Managers: Dr. Breannan Smith and Dr. Javier Romero
Topic: Loose and dynamic clothing tracking

Meta Reality Labs, Remotely, USA *May 2021 - August 2021*
Research intern

Manager: Dr. Tuur Styuck
Topic: Human body and clothing simulation

Adobe Research, Remotely, USA *May 2020 - August 2020*
Research intern

Managers: Dr. Yi Zhou and Dr. Duygu Ceylan
Topic: Physics based animation with machine learning

Tencent America, Los Angeles, USA *May 2019 - August 2019*
Research intern

Managers: Dr. Bo Yang and Dr. Ming Gao
Topic: Material Point Method with machine learning

Haptics based Virtual Surgery Group, Wuhan, China *September 2015 - June 2018*
Research assistant

Supervisor: Professor Zhiyong Yuan
Topic: Deformation simulation and haptics in virtual surgery

TEACHING

CSCI 520 Computer Animation and Simulation	<i>Spring 2022</i>
CSCI 520 Computer Animation and Simulation	<i>Spring 2021</i>
CSCI 520 Computer Animation and Simulation	<i>Spring 2020</i>
CSCI 585 Database Systems	<i>Spring 2019</i>

REVIEWS

ACM SIGGRAPH/Eurographics

2020

AWARDS

2022 Meta PhD Research Fellowship finalist

2022

USC Provost Fellowship

2018-2022

Pacific Graphics 2020 Best paper award

2021, 2020

Wuhan University The Second Prize Scholarship

2016, 2014

VRST'2016 Best Student Paper Award

2016

National Scholarship (China)

2015, 2012

Outstanding Bachelor's Degree Thesis (Hubei Province, China)

2015

Meritorious Winner in Mathematical Contest in Modeling (MCM)

2015

First Prize in The 7th National College Students Information Security Contest of China

2015

Wuhan University Merit Student

2013, 2012

Huang Zhangren Alumni Scholarship

2013