XINGJIAN (JESSIE) HAN

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EDUCATION

Boston University *Sept. 2019-Present*
- Ph.D Student in Computer Science

University of California, Berkeley *Aug. 2016-Aug. 2018*
- Bachelor of Arts, Mathematics; GPA: 3.5/4.0

Bellevue College *Sept. 2014-Jun. 2016*
- Associate of Arts and Sciences DTA with High Distinction; GPA: 3.96/4.0

SKILLS

Programming/Database	C++, Python, Java, Objective-C, Matlab, SQL, Git
Computer Graphics/Animation	Geometric Processing, Physics-based Simulation, Material Rendering
3D Modeling	Maya, Blender, Rhino, Nome
Visual Effects/Film Production	Houdini, Unity, After Effects, Renderman, Premiere

PUBLICATION

[1] Zishun Liu, **Xingjian Han**, Yuchen Zhang, Xiangjia Chen, Yukun Lai, Eugeni L. Doubrovski, Emily Whiting, Charlie C.L. Wang, "Knitting 4D Garments with Elasticity Controlled for Body Motion", SIGGRAPH 2021, accepted.

EXPERIENCE

Adobe Inc., *Creative Intelligence Lab, Adobe Research* Boston, MA
Research Intern, Supervisor: Jun Saito, Ruben Villegas *June 2021-Nov 2021*

Digital Human: Character Animation
- Conduct research in machine learning based animation for character control.

Boston University, *Shape Lab, Department of Computer Science* Boston, MA
Research Assistant, Supervisor: Prof. Emily Whiting *Sept. 2019-present*

Knitting 4D Garments with Elasticity Controlled for Body Motion
- Proposed a method for designing customized tight-fitting garments with elasticity control that consider human comfort during motion, including 3D human body reconstruction, fabric deformation prediction, and garment simulation.

Interlake Research Inc. Bellevue, WA
Research Assistant *March 2019-Sept 2019*

Artificial Intelligence Application for Facial Tracking and Animation
- Applied state-of-the-art artificial intelligence techniques to social media app. Adopt Pix2Pix to generate realistic photo from drawing. Employ video generation techniques from mocoGAN to animate facial expression. Follow styleGAN for portrait generation. Utilize TensorFlow and PyTorch with GPU in Google Colab to train the model.
- Created AR-enabled 3D humanoid model and blendshapes that are later built in Unity engine and ARKit to realize real-time face tracking.

University of Pennsylvania, *SIG Center for Computer Graphics, Department of Computer and Information Science*
Research Intern, Supervisor: Prof. Chenfanfu Jiang *May 2018-March 2019*

Micropolar APIC Method for Turbulent Fluid

- Utilized theory of microstructure of flow particles (Micropolar Fluid Theory) to animate the dynamics of turbulent fluid, with a basis of Affine Particle in Cell transfer and analysis of conservation and dynamics of fluid properties.
- Implemented with C++ and Python in Linux environment. Produced more realistic and energetic turbulent fluid animation comparing to the results generated by Micropolar on SPH fluid. Video available at xingjianhan.com

Phoebe A. Hearst Museum of Anthropology, *UC Berkeley* Berkeley, CA
Modeling Assistant, VR Development Assistant, Supervisor: Dr. Christopher Hoffman *Jan 2018-May 2018*

HeartCAVE 3D Reconstruction

- Adopted Photogrammetry to model 3D exhibitions in the museum. Photographed and generated 3D models of the exhibitions, and built those models into the applications that run on the HearstCAVE and in VR development.
- Built Virtual Reality user interface in Unity3D for multi platforms and created 3D visualization of the exhibitions to realize a digital museum experience.
- Collaborated with Mingei International Museum at UCSD (and other UC campuses with visualization platforms) to make the modern museum experience more accessible, allowing users to interact in a free and easy way with a rich collection of exhibitions.

UC Berkeley, *Department of Electrical Engineering and Computer Sciences* Berkeley, CA
Research Assistant, Supervisor: Prof. Carlo Sequin *Sept. 2017-May 2018*

Sculpture Design and Math Models

- Employed various CAD tools (Maya, Blender, Rhino) for the procedural generation of 2-Manifold sculpture geometries, capturing and modifying the features of sculpture work from ceramists (Eva Hild and Charles O. Perry) to create more generalized functions for the design of 2-manifold free-form surfaces.
- Participated in the development of sweep function in NOME (Non-Orientable Manifold Editor) that is developed in C++.

MapsReo LLC. (startup company) Berkeley, CA
Technical Manager and Co-Founder *July 2017-Mar 2018*

MapsReo

- MapsReo is a location-based social application that provides people in the community a safe environment to hang out, it is also a guidance of local living style. With two core functions - Pin-up and Team-up, people can express their feelings with any type of media contents within a legal restriction and create Ad hoc activities to get together.
- Contributed to product design and establishment of requirements, directed and managed the technical team, and provided guidance and insight to the system integration and business model. Collaborated with ASUC (Associated Students of the University of California) student senator to introduce the application to community.

TEACHING

CS 132 Geometric Algorithm, Guest Lecturer, Boston University *Spring 2021*
CS 132 Geometric Algorithm, Teaching Assistant, Boston University *Spring 2021*
CS 237 Probability in Computing, Teaching Assistant, Boston University *Fall 2020*

AWARDS AND LEADERSHIP

National Championship roster for Cal Club Tennis, Berkeley, CA *2016-2018*
Top 1% International Student Academic Award, Bellevue, WA *2014-2016*
Level 1 Teaching Certificate, Bellevue, WA *2014-2016*
International Talk Time Advertisement Department Leader, Bellevue, WA *2014-2016*
National Second Level (Professional) of Athlete Certificate in Tennis, China *2007, 2012*