XINGJIAN (JESSIE) HAN

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EDUCATION

University of Manchester — *Oct. 2023-Present*
- Visiting Ph.D. in Science and Engineering

Boston University — *Sept. 2019-Present*
- Ph.D Candidate 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	Character Animation, Physics-based Simulation, Geometric Processing
3D Modeling	Maya, Blender, Rhino, Nome
VFX/Film and Game Production	Houdini, Unreal Engine, Unity, After Effects, Renderman, Premiere

PUBLICATION

[1] **Xingjian Han**, Benjamin Senderling, Stanley To, Deepak Kumar, Emily Whiting, Jun Saito, "GroundLink: A Dataset Unifying Human Body Movement and Ground Reaction Dynamics", SIGGRAPH Asia 2023, accepted.

[2] 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

University of Manchester, *Digital Manufacturing Lab* — Manchester, UK
Research Assistant, Supervisor: Prof. Charlie C.L. Wang — *Oct. 2023-present*

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. Published at SIGGRAPH 2021.
GroundLink: A Dataset Unifying Human Body Movement and Ground Reaction Dynamics
- Present a unified dataset comprised of captured ground reaction force (GRF) and center of pressure (CoP) synchronized to standard kinematic motion captures to provide streamline for character animation usage. Published at SIGGRAPH Asia 2023.

Adobe Inc., *Creative Intelligence Lab, Adobe Research* — Boston, MA
Research Intern, Supervisor: Jun Saito, Ruben Villegas — *June 2021-Nov 2021*
Learn Physics of Human Motion

- Conducted research in machine learning based animation for character control by improving the model on pose estimation with physics details.
- Adopted recurrent mode-adaptive neural networks for motion synthesis to improve physics details.

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

Artificial Intelligence Application for Facial Tracking and Animation
- Implemented cutting-edge AI techniques in a social media app. Leveraged Pix2Pix for drawing-to-photo transitions, mocoGAN for facial animations, and styleGAN for portrait creation.
- Created AR-enabled 3D humanoid model and built in Unity engine for 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
- Leveraged Micropolar Fluid Theory for turbulent fluid animations, based on 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 website.

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 create 3D museum exhibition models. Photographed and generated 3D models, and integrated them into applications for HearstCAVE VR. Built Virtual Reality user interface in Unity3D for multi platforms and created 3D visualization of the exhibitions to realize a digital museum experience.
- Partnered with Mingei International Museum at UCSD and other UC campuses with visualization platforms to enhance museum accessibility and foster immersive, flexible user interactions.

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.

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

MapsReo
- Developed "MapsReo", a location-based social app promoting safe community interactions and reflecting local lifestyles. Features "Pin-up" for multimedia sharing and "Team-up" for spontaneous group events.
- Played a pivotal role in product design and setting requirements. Led and supervised the technical team, ensuring efficient system integration and aligning with the business model. Liaised with the ASUC student senator to promote the application within the University of California community.

TEACHING

CS 131 Combinatoric Structures, Teaching Assistant, Boston University	*Summer 2023*
CS 581 Computational Fabrication, Teaching Assistant, Boston University	*Spring 2022*
CS 132 Geometric Algorithm, Guest Lecturer, Teaching Assistant, Boston University	*Spring 2021*
CS 237 Probability in Computing, Teaching Assistant, Boston University	*Fall 2020*

AWARDS AND LEADERSHIP

Top 1% International Student Academic Award, Bellevue, WA	*2014-2016*
National Second Level (Professional) of Athlete Certificate in Tennis, China	*2007, 2012*