Yura Hwang

Kahlert School of Computing, University of Utah
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EDUCATION

University of Utah (Salt Lake City, UT) *Expected May 2027*
Ph.D. Candidate in Computer Science
Advisor: Yin Yang (Co-advisor: Cem Yuksel)

Texas A&M University (College Station, TX) *Dec. 2019*
M.S. in Computer Science
Advisor: Shinjiro Sueda

Ewha Womans University (Seoul, Republic of Korea) *Feb. 2013*
B.A. in History, Japanese and Culture

RESEARCH INTERESTS

Computer Graphics, Physics-Based Simulation, Neural Rendering and 3D Reconstruction, Computer Vision, Artificial Intelligence, Scientific Visualization, GPU Computing

PUBLICATIONS

[1] Yura Hwang, Beichen Xue, Yin Yang, Yue Jiang. "DashTrace: Understanding Task-Driven Visual Attention and Multimodal Behavior in Analytical Dashboards." *ACM CHI 2027.* Conditionally accepted, pending major revisions.

[2] Yura Hwang, Jenny Lin, Jerry Hsu, Benjamin Mastripolito, James McCann, Cem Yuksel. "Neighbor-Aware Data-Driven Relaxation of Stitch Mesh Models for Knits." In *Proceedings of ACM SIGGRAPH Asia 2025*, Hong Kong, December 15–18, 2025.

[3] Yura Hwang, Theodore A. Uyeno, Shinjiro Sueda. "Bioinspired Simulation of Knotting Hagfish." In *Proceedings of the International Symposium on Visual Computing (ISVC)*, Lake Tahoe, NV, October 7–9, 2019.

[4] Ying Wang, Nicholas J. Weidner, Margaret A. Baxter, Yura Hwang, Danny M. Kaufman, Shinjiro Sueda. "REDMAX: Efficient & Flexible Approach for Articulated Dynamics." *ACM Transactions on Graphics*, 38(4), Article 104, 2019. (SIGGRAPH 2019.)

[5] Emily E. Evans, Yura Hwang, Shinjiro Sueda, Theodore A. Uyeno. "Estimating Whole Body Flexibility in Pacific Hagfish." Poster presented at the *Society for Integrative and Comparative Biology Annual Meeting*, San Francisco, CA, January 3–7, 2018.

RESEARCH EXPERIENCE

Graduate Research Assistant
University of Utah | Salt Lake City, UT | *Aug. 2021–Present*

- Current research involves developing hybrid neural rendering methods that integrate Neural Radiance Fields (NeRF) and 3D Gaussian Splatting (3DGS) for efficient 3D scene reconstruction.
- Investigated task-driven visual attention and interaction behavior in analytical dashboards using eye-tracking and mouse-interaction data. In collaboration with the LUNA Lab at University of Utah.
- Developed a physics-based simulation model and mesh-relaxation methods for computational knitting that incorporate local stitch topology to predict fabric deformation. In collaboration with the Carnegie Mellon Textiles Lab at Carnegie Mellon University.
- Investigated texture-resampling techniques to improve edge sharpness and reduce blurring in AR/VR displays.

Texas A&M University | College Station, TX | *Sep. 2017–May 2019*

- Developed HagSim, a physics-based sliding simulator using rigid-body dynamics, motivated by the biological behavior of thigmotaxis. In collaboration with Theodore Uyeno's Lab at Valdosta State University.

TEACHING EXPERIENCE

Guest Lecturer
University of Utah | Salt Lake City, UT

Undergraduate Ethics in Computing — *Nov. 2026*

Graduate Teaching Assistant
University of Utah | Salt Lake City, UT

Graduate Courses |

- Database Systems — *Spring 2026 & 2027*
- Interactive Computer Graphics — *Spring 2022*

Undergraduate Courses |

- Ethics in Computing — *Fall 2026*
- Introduction to Computer Graphics — *Fall 2021 & 2025*

Graduate Student Assistant
Texas A&M University | College Station, TX

Undergraduate Courses |

- Discrete Structures for Computing — *Fall 2019*

WORK EXPERIENCE

Research Intern

Innopeak Technology | Bellevue, WA | *Summer 2023 & 2024*

- Developed an Android mobile application for real-time scene reconstruction using 3D Gaussian Splatting.
- Developed a physics-based, bubble-like soft-body simulation for Android live wallpapers.

AWARDS & HONORS

Best Scientific Visualization Team Project — *Spring 2022*
University of Utah

School of Computing Department Fellowship — *Fall 2020-Spring 2021*
University of Utah

Travel Grant Award — *Oct. 2019*
Texas A&M University

Grace Hopper Conference Scholarship — *Oct. 2019*
AnitaB.org

KFAS (Korea Foundation for Advanced Studies) Scholarship — *2010-2013*
SK Group

Dean's List, Scholarship for Honor Student — *Spring & Fall, 2012*
Ewha Womans University

LANGUAGES Korean (Native), English (Fluent), Japanese (Intermediate)

OTHER SERVICES

SIGGRAPH Student Volunteer — *Aug. 2018*

Hayek Academy Assistant — *Jul. 2015 & 2016*

Holy Family Child Adoption Center Volunteer — *Oct. 2013–Feb. 2014*

Foreign Affairs: A Compact History (G. Tullock) co-translation — *Feb. 2014*

Ewha Archive Volunteer — *Aug.–Dec. 2012*