

Eric Nai-Li Chen

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Education

MS **Brown University**, Computer Science
Providence, RI
Advisor: Jeff Huang

Sept 2023 – May 2025

BS **UCLA**, Computer Science
Mathematics Minor
Los Angeles, CA
GPA: 3.84

Sept 2018 – June 2023

Publications

L.ink: Procedural Ink Growth for Controllable Surprise
Eric Nai-Li Chen, Joshua Kong Yang, Jeff Huang, Tongyu Zhou
Proc. ACM User Interface Software and Technology (UIST '25)
[10.1145/3746059.3747702](https://doi.org/10.1145/3746059.3747702)

Sept 2025

L.ink: Illustrating Controllable Surprise with L-System Based Strokes
Eric Nai-Li Chen, Tongyu Zhou, Joshua Kong Yang, Jeff Huang
Extended Abstracts ACM Human Factors in Computing Systems (CHI EA '25)
[10.1145/3706599.3720069](https://doi.org/10.1145/3706599.3720069)

April 2025

Experience

Adobe, Research Scientist Intern
Mentors: Li-Yi Wei, Rubaiat Habib Kazi

San Jose, CA
June 2025 – Sept 2025

- Designing generative tools for 2D special effects animation

Brown HCI Lab, Research Assistant
Advisor: Jeff Huang, Mentor: Tongyu Zhou

Providence, RI
Feb 2024 - May 2025

- Personally invented, implemented, and deployed L-link: an L-system vector drawing tool empowering artists to create animated organic structures with a single stroke; see *first-author publications in UIST '25 and CHI EA '25*
- Designed direct-manipulation rule editor for intuitive L-system control
- Invented hand-drawn stamp feature to extend L-system's expressive capability
- Conducted user study investigating how controllability & surprise in procedural tools impacts creative workflow of artists

NASA Academic Mission Services, Data Science Intern
Mentors: David Bell, Aditya Das, Milad Memarzadeh

Mountain View, CA
June 2020 - Sept 2021

- Led multi-organizational project creating wildfire machine learning models in collaboration with Civil Air Patrol captain, NASA research scientist, and USRA RIACS Director
- Aggregated data from 600,000 flights across 345 US airports to train end-to-end machine learning pipeline predicting flight delays
- Presented findings in 3 *first-author research posters* at NASA Ames poster symposium

Invited Talks

Continuous Creative Channels Between Artist and Medium
UCSD Design Lab

Oct 2025

Selected Projects

SplatBrush: XR Painting with Gaussian Splats

- Designed WebXR palette and brush interface for interactive 3D painting with Gaussian textures optimized from real-world materials
- Gathered multi-view material dataset using custom capture ring

Differentiable Rendering of Signed Distance Fields

- Implemented Wang et al.'s "A Simple Approach to Differentiable Rendering of SDFs"
- Created animated visualizations of gradient descent in action by optimizing lights, materials, object transformations, and freeform geometry

Hyacinth Labyrinth: A Procedural Hedge-Maze Game

- Built custom L-system engine in Blender and defined configurable JSON format with tunable stem radius, leaf size, branch angle, tessellation levels, and pruning

Video Analogies

- Implemented patch-based style transfer from images to videos, extending Hertzmann et al.'s "image analogies"

MPC: Productive Beauty Without Trust

- Authored illustration for 10th Heidelberg Laureate Forum's Intercultural Science-Art Project, with a whimsical interpretation of secure multi-party computation as fruit hybridization

Selected Coursework

Brown University: Computer Graphics, Advanced Computer Graphics, Computational Photography, Computer Vision for Graphics & Interaction, Deep Learning, Interaction Design

Rhode Island School of Design: Drawing with Computers

UCLA: Software Engineering, Programming Languages, Formal Languages & Automata Theory, Artificial Intelligence, Machine Learning, Database Management Systems, Computer Networks, Operating Systems, Algorithms & Complexity, Real Analysis, Set Theory, Category Theory

Skills

Languages: JavaScript/TypeScript, HTML/CSS, C/C++, Python

Technologies: React, Three.js, OpenGL, TensorFlow, Express, Flask

Other: Public speaking, Leadership, 4th Degree Black Belt and ATA Taekwondo World Champion