

**JIMMY WEI-CHUN CHENG**

Special Faculty, Master of Science in Computational Design

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**BIO**

Jimmy Wei-Chun Cheng is a designer, researcher, and educator working at the intersection of architecture, Artificial intelligence, and media theory. He is currently a faculty member in the School of Architecture at Carnegie Mellon University and one of the Lead Organizers of the AI Architecture Symposium, PlayingModels. Prior to joining CMU, he taught studios, workshops, and seminars at UCL Bartlett, Boston Architectural College, the Rhode Island School of Design, and the Architectural Association Visiting School Seoul. From 2019 to 2021, he practiced in Tokyo as a project designer with Junya Ishigami + Associates and Sou Fujimoto Architects.

Cheng's research investigates how representation, medium, and technology transform the architectural design process, with a particular focus on multimodal and conversational AI. He studies how large language models, generative image systems, and search-driven platforms mediate between information, bodies, architectural form, and their associated political implications across scales. His work examines how AI reshapes the meanings of language, imagery, and space, drawing on semiotics, media theory, cybernetics, and real-time simulation.

Cheng holds a Bachelor of Science in Architecture and Urban Design from the Chinese Culture University in Taiwan; a Master of Architecture from the Rhode Island School of Design; and two post-professional degrees from SCI-Arc—a Master of Science in Architectural Technologies and a Master of Science in Design Theory and Pedagogy—where he received the Hsinming Fung + Craig Hodgetts Postgraduate Thesis Prize in 2022.

**AREA OF SPECIALIZATION**

Architectural Design, Computational Design, Generative System, Digital Design Theory, Architectural Representation, Generative AI

## **EDUCATION**

**University of Florida**, Gainesville, Florida, USA

Ph.D. in Architecture (Dropped out)

*Fully Funded Doctoral Research Fellowship. Focusing on Human X AI 3D modeling platform development and AI application in Urban research.*

SHARE LAB 2023 - 2024

Prof. Karla Saldana Ochoa

**Southern California Institute of Architecture SCI-Arc**, Los Angeles, California, USA

Master of Science in Design Theory and Pedagogy, 2022-2023

Thesis: “*Sensing and Simulating*”

Prof. Marcelyn Gow, Masha Hupalo, advisors

**Southern California Institute of Architecture SCI-Arc**, Los Angeles, California, USA

Master of Science in Architectural Technologies, 2021-2022

Thesis: “*Artificial Imagination OWL*”

Hsinming Fung and Craig Hodgetts Post-Grad Thesis Prize

Graduated with Distinction

Prof. M. Casey Rehm, Soomeen Hahm, and John Copper, advisors

**Rhode Island School of Design RISD**, Providence, Rhode Island, USA

Master of Architecture I, 2014 - 2018

Thesis: “*The space inbetween liminal space.*”

Prof. Kyna Leski and Christopher Bardt, advisors

**Chinese Culture University**, Taipei, Taiwan

Bachelor of Science in Urban Design and Architecture, 2007-2011

Thesis: “*Urban Aboriginal Tribe Preservation Design*”

Prof. Li-Xing Wang, advisor

## **PROFESSIONAL PRACTICE**

**Sou Fujimoto Architects**, Tokyo, Japan

Project Designer, 2021

Project: Shenzhen Reform and Opening-up Exhibition Hall, House of Future

**Junya Ishigami + Associates**, Tokyo, Japan

Project Designer/ Team Lead, 2019-2020

Project: Forest Kindergarten

**ASK Design Build**, Arlington, Massachusetts, USA

Junior Designer, 2018-2019

Project: Totto Ramen, Sara Hildén Museum Competition

**Junya Ishigami + Associates**, Tokyo, Japan

Internship, 2015 summer

Project: KAIT Plaza, House& Restaurant, Bauhaus Museum Competition

**Yuan Architects**, Taipei, Taiwan

Junior Designer, 2011-2012

Project: House S, Lan Villa, Hsiu Gang Villa, Waiting for Alice

## **TEACHING EXPERIENCE**

**Carnegie Mellon University**, Pittsburgh, Pennsylvania, USA

Special Faculty in Computational Design, Summer 2025 - Present

Course: *48724-Scripting and Parametric Design/ 48552-Gen AI Architectural Intelligence - Theory/ 48562-Gen AI Architectural Intelligence - Workshop/ 48632-Taxonavigating the Digital Space/ 62706-Generative System in Design*

**Carnegie Mellon University**, Pittsburgh, Pennsylvania, USA

Visiting Assistant Professor, Fall 2024 - Spring 2025

Course: *48724-Scripting and Parametric Design/ 48651-Vector Visions - Intro GenAI for Designer/ 48652-Pixels to Photons - Intro to Touchdesigner/ 48632-Taxonavigating the Digital Space/ 62706-Generative System for Worldbuilding*

**UCL Bartlett B-Pro**, Online

Workshop Instructor, September 29th - October 10th, 2025

*Hard Data, Soft City: From Atlas to Alley: An ML Approach to Personalizing Open-Web Data*

**University of Florida**, Gainesville, Florida, USA

Teaching Assistant, Spring 2024

Course: *AI for Built Environment*

Prof. Karla Saldana Ochoa

Teaching Assistant, Fall 2023

Course: Design Studio 7

Prof. Karla Saldana Ochoa

**AA Visiting School**, Seoul, South Korea

Unit 3 Tutor, Summer 2023

Course: *Sensing and Simulating, exploring the social dynamics of small urban environments*

Unit 3 Tutor, Summer 2022

Course: *K-Appophonia Reflection, Information, and Machine Vision Sampling*

**University of Michigan Taubman College**, Ann Arbor, Michigan, USA

Co-Instructor, Workshop October 2023

Course: *Sensing and Simulating Machine Learning for a Human-Centered Urban Design*

**The University of Texas at Austin**, Austin, Texas, USA

Instructor, Workshop 2022

Course: *Realistic Representation in Twinmotion*

**Southern California Institute of Architecture SCI-Arc**, Los Angeles, California, USA

Teaching Assistant, 2022 Fall

Course: *Giant Robot(ABB 6700 robot) + 3D disco diffusion*

Prof. M. Casey Rehm

Teaching Assistant, 2023 Spring

Course: *Undergrad 3rd year Core Studio*

Prof. M. Casey Rehm

**Boston Architectural College**, Boston, Massachusetts, USA

Adjunct faculty, 2018-2019

Course: *Visual Thinking*

**Rhode Island School of Design**, Providence, USA

Co-Instructor, 2018 Winter Session

Course: *The Depth of Lines*

Teaching Assistant, 2017 Summer

Course: *Introduction to Architecture Design Studio*

Prof. Nathan Friedman

Teaching Assistant, 2017 Fall

Course: *Urban Ecolog Core Studio*

Prof. Manuel Cordero Alvarado

## **RESEARCH EXPERIENCE**

**Carnegie Mellon University**, Pittsburgh, Pennsylvania, USA

Principal Investigator, 2026 -

Project: AI Search Platform for Architectural Precedents, In progress

Funded by CMU PJ Dick Grant

**Carnegie Mellon University**, Pittsburgh, Pennsylvania, USA

Principal Investigator, 2026 -

Project: Digital Proxy Simulation Platform, In progress

**University of Florida**, Gainesville, Florida, USA

Research Assistant, 2023-2024

Project: Florida Digital Twin

Principal Investigator: Dr. Christine Angelini

**Southern California Institute of Architecture SCI-Arc**, Los Angeles, California, USA

Research Assistant, 2021-2022

Project: AI Sandbox

Research Lead: Damjan Jovanovic

Funded by Epic Game Mega Grant

**Rhode Island School of Design RISD**, Providence, Rhode Island, USA

Research Assistant, 2016-2018

Project: Dream House Complex Geometry 3D Modeling

Research Lead: Prof. Kyna Leski

## **INVITED LECTURE**

**“Digital Agency and Interfaces”**

Texas Tech University, 2025 Spring

**“Situating Research”**

Carnegie Mellon University, 2024 Fall

**“Taxonavigating Multivariate Design Realities - Lee-Su Huang + Jimmy Cheng”**

Playing Models: Artificial Intelligence, Architecture Storytelling, ETH, 2024 Summer

**“Exploring the Horizon: Navigating Efficiency and Creativity in Computational Design”**

Boston Architectural College, Online Conference, New Technology Techniques: Computation Panel, 2023

**“Simulated Aesthetic: Exploring a Perceived Reality through AI in Architecture”**  
inD Guangzhou Art Book Fair, 2024

**“Simulation and Perceived Reality”**  
SCI-Arc, MS Architectural Technologies 2024 Spring

**“Sensing & Simulating Machine Learning for a Human-Centered Urban Design”**  
Taubman College, University of Michigan, 2023 Fall

**“Technology, Tool, Representation, and Form: The Role of Representation in the Age of Artificial Intelligence”**  
ArchiTAG online workshop, 2024

**“Searching and Staging”**  
University of Florida AI days: AI in the built environment, 2023

**“Developing Professional Technologies”**  
Boston Society of Architects, Computation Panelist, 2023

**“Beyond Simulation: Enriching Architectural Design with Unity’s ML-Agents’ Toolkit”**  
Unity Creator Day AI 2023

**“Design with Synthetic Imagination”**  
NCKU Lecture 2023

**“The Art of Sampling—Reflections on Drawing, Data, Information, and Machine Vision”**  
Boston Society of Architects, 2022

## **INVITED REVIEWS**

**IAAC, Master in Advanced Computational Design for Architecture**, 2025 Fall Final Review,  
Instructor: James McBennett

**CMU SOA Lab4Cybernetics: Engaging Wicked Challenges**, 2025 Fall Final Review,  
Instructor: Paul Pangaro

**CMU SOA Master of Computational Design, Pre-Thesis**, 2025 Fall Final Review

**CMU SOA Praxis One Studio, B.Arch**, 2025 Fall Final Review

**CMU SOA Advanced Option Studio, Metamorphic Grounds**, 2025 Fall Final Review,  
Instructor: Maryam Karimi

**CMU SOA Master of Computational Design, Thesis, 2025 Spring Mid + Final Review**

**Kent State University, CAED Integrated Design Studio, 2025 Spring Final-Review**

**CMU SOA Bachelor's Thesis, 2025 Spring Mid + Final Review, Instructor: Mary-Lou Arscott**

**CMU SOA Fundamental of Computational Design, 2025 Spring Mid + Final Review, Instructor: Vernelle A. A. Noel**

**CMU SOA Shape Grammar, 2025 Spring Mid + Final Review, Instructor: Vernelle A. A. Noel**

**CMU SOA Image Deep, 2025 Spring Mid + Final-Review, Instructor: Dana Cupkova**

**UCLA AUD Models: Objects and Qualities, 2025 Winter Mid-Review, Instructor: Tucker van Leuwen-Hall**

**CMU ARC 48531 Fabricating Customization, 2024 Fall Mid-Review, Instructor: Neal Lucas Hitch**

**CMU Waste Machines, 2024 Fall Mid-Review, Instructor: Daragh Byrne**

**SCI-Arc Architectural Technologies City as platform, 2022 Fall, Instructor: M. Casey Rehm**

**SCI-Arc Applied Study Steel Odyssey, 2022 Fall, Instructor: Soomeen Hahm**

**SCI-Arc Vertical Studio, Architectural Technologies, 2023 Spring, Instructor: Soomeen Hahm**

**UCLA AUD Technologies Studio Winter Quarter Tech Seminar, Proximity Living, 2022 Fall, Instructor: Laure Michelon**

**UCLA AUD Models: Objects and Qualities, 2023 Winter, Instructor: Tucker van Leuwen-Hall**

**UCLA AUD IDEAS Winter Show, 2023, Winter, Instructor: Laure Michelon, Tucker van Leuwen-Hall, Liam Denhamer, Valeria Ospital**

**UCLA AUD IDEAS Studio, Ready On Set!, 2022 Fall, Instructor: Tucker van Leuwen-Hall**

**UCLA AUD IDEAS Tech Seminar, Proxy Faces, 2022 Fall, Instructor: Laure Michelon**

**University of Florida, Design 7, Studio Mid Review 2023 Fall, Instructor: Karla Saldaña Ochoa**

**UCLA AUD IDEAS Seminar, MASS Transit, MASS Housing, 2023 Fall, Instructor: Tucker van Leuwen-Hall**

**University of Florida, Design 7**, Studio Final Review 2023 Fall, Instructor: Karla Saldaña Ochoa

**SCI-Arc Architectural Technologies, City as Platform**, 2023 Fall, Instructor: M. Casey Rehm

## **AWARD**

**Pioneering Research HiPerGator Award**, UF SHARE LAB, 2024

**Playing Models AI Poster competition**, 2nd Prize, 2023

**SCI-Arc** Hsinming Fung and Craig Hodgetts Post Grad Thesis Prize, 2023

**AIA RI** Design Excellence, 2017

**Nuclear, archoutloud competition**, Top 50 finalist, team leader, 2017

**The temple for Hilma, competition**, 30 Final shortlist, team leader, 2017

## **EXHIBITION**

**Texas Tech University**, The Domestic Game- Automa-vision, Collaboration with Nero He, 2025

**Taiwan Design Week**, Featured Designers, 2024

**CityX Venice 2023 — Virtual Pavilion** (Casey Rehm, SCI-Arc)

**SCI-Arc North Gallery**, Sensing and Simulating, 2023

**GA Gallery Tokyo**, ishigami junya forest kindergarten, 2021

## **CONFERENCE PUBLICATION**

**Customize3DForm: Introducing human subjectivity to objective objects using a text-based generative pipeline**, CAADRIA, 2025

## **PRESS**

**Archinect Feature, Thesis Review Series**, 2023

**Dezeen school show**, SCI-Arc spotlights ten architecture and design projects, 2022

**RISD LARGE FORMAT, ARCHITECTURE TRIENNIAL EXHIBITION**, 2019

## **ACADEMIA SERVICE**

**Ferguson Jacobs Prize in Architecture Research Award**, Pittsburgh, Pennsylvania, USA  
Jury, 2025 Fall

**John Knox Shear Award Travel Award**, Pittsburgh, Pennsylvania, USA  
Jury, 2025 Fall

**John Knox Shear Award Representation Award**, Pittsburgh, Pennsylvania, USA  
Jury, 2025 Spring

**Carnegie Mellon Architecture Master of Computational Design Admission**  
Admission Committee, 2025 Spring

**Playing Models Conference**, Pittsburgh, Pennsylvania, USA  
Lead Organizer, 2025 Summer

**Playing Models Conference**, Zurich, Switzerland  
Organizer, 2024 Spring

**Playing Models Conference**, Gainesville, Florida, USA  
Logistics, 2023 Fall