

CHIA-CHIA LIU, EIT

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PROFILE

A designer who strives to reach balances at the intersection between engineering and architecture, create meaningful and beautiful spaces with the basis on material innovations, revolutionary enclosures, structural consistancies, environmental analysis, and computational formal research.

SKILLS

Modeling

Rhino. Grasshopper. ZBrush. Maya. Revit. SolidWorks. AutoCAD.

Graphics

Adobe Photoshop. Adobe Illustrator. Adobe InDesign. Adobe Premiere Pro. Adobe After Effects. V-Ray. KeyShot. Twin Motion. Style Transfer

Fabrication

Laser Cutting. 3D Printing. CNC Milling. Metal mill and lathe work.

Simulation

ANSYS Finite Element Analysis. SolidWorks Computational Fluid Dynamics. Visual Analysis. Karamba 3D.

Coding

MATLAB. Python. AI GAN Training

LICENSE / HONORS

Civil E.I.T. Licensure

Pennsylvania Board Registration. 2020

UNI Competition

Editor's Choice Award. 2020

Harlan Coornvelt Memorial Award

University of Pennsylvania. 2019

University Rover Competition

8th International. 2017
Structural Systems Designer

EDUCATION

University of Pennsylvania
Stuart Weitzman School of Design
M.Arch Candidate

2018-2021
Philadelphia, PA

Cornell University
College of Engineering
B.S. Material Science Engineering
Architecture Minor, Mechanical Engineering Minor

2014-2018
Ithaca, NY

EXPERIENCE

Polyhedral Structural Lab

2020-2021

Research Assistant

Philadelphia, PA

- + Geometric structural and computational design method in form finding.
- + Polyhedral 2D and 3D graphic statics.

University of Pennsylvania School of Design Teaching Assistant

2019-2021
Philadelphia, PA

- + ARCH 535 & 536 Structures with Richard Farley
- + ARCH 500 Graduate Studio with Danielle Willems

Sabin Design Lab Research Associate

2016-2018

Ithaca, NY

- + Matrix architecture, auxetic materials, FEA on 3D printed kirigami matrices.
- + Interdisciplinary cooperations with architects, engineers, and computer scientists in designing geometries that are responsive to external stimuli.

PDF Solutions Inc.

2016

Industrial Design Summer Intern

San Jose, CA

- + Performed computational fluid dynamics simulations in resolving heating problems in a structural systems
- + Responsible in building both 3D models and physical models of an enclosure system in a scanning electron microscope.

EXHIBITIONS / PUBLICATIONS

MoMA PS1: Lumen

2016-2017

Sabin Design Lab

Ithaca, NY

Misting Systems Engineer

NYC, NY

3D Graphical Statics Book (In progress)

2020-2021

Design Guide for Funicular Polyhedral Structures in Form Finding

Philadelphia, PA

Cowriter with Professor Masoud Akbarzadeh

Symposium on Simulation for Architecture (SimAUD)

Matrix Architecture: 3D-Printed and Simulated Kirigami Matrices & Auxetic Materials

2017

Madeleine Eggers, Jingyang Liu, Chia-Chia Liu, Ben Norman, and Jenny E. Sabin

Toronto, Canada

Responsive Kirigami: Context-Actuated Hinges in Folded Sheet Systems

2018

Jingyang Liu, Chia-Chia Liu, Madeleine Eggers, and Jenny E. Sabin

Delft, Netherlands