

Kexin Lu

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EXPERIENCE

OPT Industries, Inc.

Sep 2021 – Present

Senior Computational Designer, Creative Design for Additive Manufacturing

Medford, MA

- [Selected Design Portfolio](#)
- Led interdisciplinary project teams as Senior Computational Designer, developing and implementing advanced computational design tools and methodologies that optimized product development cycles and improved design precision. My leadership facilitated effective collaboration across engineering and material science teams, driving innovations that markedly improved product performance and user engagement.
- Developed and commercialized innovative products, leading projects that expanded the company's portfolio into new markets, significantly enhancing brand visibility.
- Pioneered a new design for a footwear component that improved product performance and comfort, resulting in a robust industry partnership (details confidential due to NDA).
- Directed the entire lifecycle of a high-value product, from ideation through to mass production, culminating in a significant potential contract that opened new market avenues and enhanced corporate growth strategies (specifics confidential).
- Created unique design solutions for entertainment industry clients, including a bespoke skin costume and a digital texture library inspired by marine biology, which have been crucial in immersive audience experiences.
- Innovated in the area of decorative 3D printed materials, developing a widely applicable [wallpaper product](#) in collaboration with a major industry player, with further phases pending public release.
- Designed artistic and functional elements for luxury watches, enhancing the aesthetic appeal and brand distinction for globally recognized clients.
- Developed and refined advanced computational tools that enhanced the efficiency and creativity of the entire design team. Notable achievements include the creation of "Attribute Mapping" algorithms and bespoke visualization tools that optimized production and design processes, underscoring my proficiency in C# scripting and geometry processing.

Morphing Matter Lab (CMU HCII)

Sep 2019 – Aug 2021

Research Assistant

Pittsburgh, PA

- Computational design of bio-inspired structures
- Developed tool for real-time visualization of shape changing interfaces
- Hydrogel-based 3D printing
- Awards: Augmented Humans 2022 Honorable Mention | Video Runner Up prize for [#SmartOceansChallenge Smart Oceans 2020](#)

China Architecture Design & Research Group

Mar 2017 – June 2018

BIM Technician, Generative Design and Parametric Modeling

Beijing, CHINA

- Worked on different scopes of projects from urban planning of commercial streets to the facade design of commercial complexes, member of the team during the projects' CD and CA phases
- Produced BIM Modeling and parametric facade design of the elevation, produced construction drawing sets including elevator detail etc.
- Assisted in interior design, light design, MEP and structural modification
- Contacted and followed up with material supplies

The Palace Museum

3D Specialist

Feb 2019 – May 2019

Beijing, CHINA

- Analyzed 3D scanning data of the historical parts and converted into low-poly geometries with high-res texture information in precise dimensions
- Proposed virtual construction and assembly plan for restoration of the Hall for Ancestral Worship

M.O.D.E.S Studio

Associate Designer

June 2015 – June 2019

Beijing, CHINA

- Worked on projects from furniture design, interior design to facade design
- Proposed computational solutions to the design the fabrication requirements
- Produced diagrams instructing construction process

EDUCATION

Carnegie Mellon University

Master of Science in Computational Design

Aug 2021

Pittsburgh, PA

- Admission with Merit-Based Scholarship
- Awards: Frank-Ratchye STUDIO for Creative Inquiry Stay at Home Scholarship(during the pandemic)

Beijing University of Technology

Bachelor of Architecture

July 2018

Beijing, CHINA

- Teaching Assistant of the Computer-Aided Design course
- Leadership: English Club (Board Member), Graphic Design Club (Leader of the design team)

PUBLICATIONS

- [Hydrogel-based DIY Underwater Morphing Artifacts](#)
- [Morphace: An Integrated Approach for Designing Customizable and Transformative Facial Prosthetic Makeup](#)
- [Inverse Design Tool for Asymmetrical Self-Rising Surfaces with Color Texture](#)

PRESS

- [OPT @ Design Post Cologne](#)
- [OPT @ IFAI \(Industrial Fabrics Association International\)](#)
- [Computational Design Tool for Underwater Shape Changing Interface](#)
- [Honorable mention in the Students category in Fast Company's 2022 Innovation by Design Awards](#)
- ["Yan" Ancestral Hall](#)
- [The "plug-in" life](#)

OTHER

- **Technical Skills:** Python, Midjourney, Rhino, grasshopper(C#, Python), Houdini, C4D, Blender, ZBrush, Revit, SketchUp, Lumion, V-Ray, Adobe Photoshop, Illustrator, InDesign, Premier, AfterEffect, Microsoft Office, GSuite
- **Languages:** Mandarin (native), English (fluent)