

YI-CHIN LEE

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yichin-lee.com

EDUCATION

- 2018 - 2020 **Carnegie Mellon University(CMU)**, Pittsburgh, PA
Master of Science in Computational Design
- 2016 - 2018 **National Cheng Kung University**, Taiwan
Master of Technology and Art
- 2012 - 2016 **National Cheng Kung University**, Taiwan
Bachelor of Science in Industrial Design

WORK EXPERIENCE

- Aug 2018 - present **Research Assistant, School of Architecture, CMU**
Advisor: Professor Joshua Bard
Researched hybrid manufacturing process on customized concrete panels
- Aug 2018 - present **Research Assistant, Morphing Matter Lab, CMU**
Advisor: Lining Yao
Designed fabrication tools for self-folding soft material
- Sep 2018 - May 2019 **Research Assistant, Code Lab, CMU**
Advisor: Daniel Cardoso
Researched on component-based languages for digital fabrication
- Aug 2017 - Jul 2018 **Project Assistant, YENTING CHO Studio, London, UK**
 - Integrated data analysis, algorithmic geometric modeling and digital fabrication into interactive fabrication platform
- Jul 2015 - Sep 2015 **Design Intern, Mediamatic, Amsterdam, Netherlands**
 - Arranged city scale exhibition according to clients needs and city government's constraints.
 - Built up Amsterdam street view database for exhibition " Ruud all over."
- Jul 2013 - Sep 2013 **Interaction Design Intern, XXtraLab Design Taipei, Taiwan**
 - Produced commercial video for an educational exhibition
 - Designed the interface of an interactive educational kiosk and implemented user center design

PUBLICATIONS

- Refereed Conference Papers J Liu, **YC Lee**, D Cardoso, "Molecular Tectonics: Computational Design and Fabrication of Highly Customizable Architectural Space Frames." International Journal of Architectural Computing 20, no.3, 2020
- Y Tao, Y Do, H Yang, **YC Lee**, G Wang, C Mondoa, J Cui, W Wang, L Yao, Morphlour: Personalized Flour-based Morphing Food Induced by Dehydration or Hydration Method, Proceedings of the 32nd Annual ACM Symposium on User Interface Software and Technology, 2019
- YT Cho, YL Kuo, YT Yeh, **YC Lee**, MovIPrint: Move, Explore and Fabricate, Proceedings of the 27th ACM International Conference on Multimedia, 2019
- E Markvicka, G Wang, **YC Lee**, G Laput, C Majidi, L Yao, ElectroDermis: Fully Untethered, Stretchable, and Highly-Customizable Electronic Bandages, Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems, 2019
- Yi-Chin Lee**, Lea Albaugh, Layer-Based Fabrication of Sewn 3-D Objects, present poster in ACM SCF 2019
- YH Hung, DS Hwu, C Arkenson, **YC Lee**, Designing for Retweets—A Study on Twitter Interface Design Focusing on Retweetability, Procedia Manufacturing, 2015
- C Arkenson, **YC Lee**, YY Chou, CY Huang, Tag and seek: a location-based game in Tainan City, Proceedings of the first ACM SIGCHI annual symposium on Computer-human interaction in play, 2014

RESEARCH PROJECTS

- Spring 2019 - Present **Tooled Deposition of High-Performance Building Components for Post Processing of 3D printed Architectures**
- Working with Professor Joshua Bard
 - Developed end-of-arm tool for 6-axis robotic arm.
 - Robotic arm programming and execution
- Fall 2018 - Spring 2019 **Morphlour**
- Working with Professor Lining Yao
 - Designed tools to fabricate self-folding materials
 - Executed scientific experiment to quantify the transformative dough material in order to generate the math function to describe the morphing mechanism
- Fall 2018 **ElectroDermis: Fully Untethered, Stretchable, and Highly-Customizable Electronic Bandages**
- Working with Professor Lining Yao
 - Designed a fabrication approach that simplifies the creation of wearable electronics
 - Developed customization workflow and the user interface for wearables
- Fall 2018 **Generative fabrication**
- Working with Professor Daniel Cardoso
 - Explored the digitally produced modular components and researched on assembly logic with assembly processes involving human-machine collaboration
- Fall 2018 **Industrial robotic arm metal wire winding technique**
- Utilized the industrial robot to fabricate the metal wire into winding modules by designing the mechanic tool and developing the human-machine collaboration workflow
- Fall 2018 **Human robot interaction research: Approaching bystanders for help**
- Studied the bystanders' willingness to help a social robot when it requests help in a social context by designing the research experiment and analyzing the collected data
- Jan 2017 - Sep 2018 **MovIPrint: Transforming Full Body Movement for Fabrication**
- Invented a framework that encodes full body movement into buildable models
 - Constructed organic and customized crafts using fabrication methods such as 2D textile print, animation, modular design, laser cutting, CNC milling, and 3D printing
- Fall 2016 - Spring 2018 **A Paper, A Module, and Space : Integrated Development of Self-Standing Modular Structures from Origami**
- Engineered a self-standing module partition system based on origami structure
 - Improved origami folding efficiency by combining craftsman skill and manufacturing methods
 - Presented the durability of self standing origami structure by building a space scale pavilion in an exhibition
- Sep 2014 - Dec 2015 **Manufacturing methods of bamboo steam bending**
- Developed the manufacturing method for bamboo steam bending by analyzing material properties and designing moulding process for mass production of bamboo crafts
- Feb 2014 - Jul 2014 **Tag and seek: a location-based game in Tainan City**
- Developed a location-based game application on Android system to improve tourists' experience in Tainan
 - Designed friendly app interface by researching service design, building story board to define users' behavior patterns
 - Achievement: Finalist for 2014 CHI Play conference and exhibited in Toronto