

LIU YANG

550 Memorial Dr., Cambridge, MA, 02139 | (857) 500-1924

Yang0129@media.mit.edu | Lyouyeung.com

I'm an antidisciplinary tech-design researcher. My passion is to integrate discrete morphological design methods into a systematic knowledge graph and to improve the equity & accessibility of international design education. I interested in: HCI, AI, computational design, Fabrication, intelligent materials, morphing matters, space architecture, and all the exciting adventures and explorations.

EDUCATION

Massachusetts Institute of Technology (MIT) - Visiting Researcher Media lab – Tangible Media Group	2022 - NOW
Tsinghua University (THU) - Ph.D. in Design National Academic Award Top 2%	2019 - 2023
École Nationale Supérieure d'Architecture et de Paysage de Lille (ENSAPL) - Visiting Student Fully funded by the French Ministry of Education and the government	2019 - 2019
South China University of Technology (SCUT) - M.Arch National Academic Award Top 1%	2016 - 2019
Taiwan Chaoyang University of Technology - Visiting Student Fully funded by China Petroleum University (UPC)	2015 - 2015
China University of Petroleum (UPC) - B.Arch Distinction Award, Top 1%	2011 - 2016

AWARD

National Scholarship Top 1% In Tsinghua University (THU)	2022
Full Scholarship for Visiting Study in MIT From China Scholarship Council (CSC)	2022
National Scholarship Top 1% in South China University of Technology (SCUT)	2018
Provincial Distinguished Graduate Top 1% in China University of Petroleum (UPC)	2016
Outstanding Leader of Student Association As the president, built the top 10 Association in UPC (Top 5%)	2014

PUBLICATION

BOOK



The Research & Application of Design Morphology

Song Qiu etc. (Co-author on the editorial board)

Key project of National Social Science Foundation, 2019

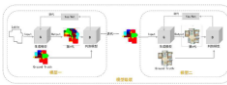


The Method of Design Morphology

Song Qiu etc. (Co-author on the editorial board)

Key project of National Social Science Foundation, 2023 (To be published)

M.ARCH DISSERTATION



Research on Generation of Youth Apartment Plan Based on Deep Learning | [Link](#)

Liu Yang

CNKI, 2019

JOURNAL & CONFERENCE

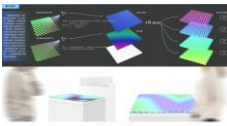


The Methodology of Landscape Installation Design Based on Digital Tools |

[Link](#)

YANG Liu, SONG Gang

Landscape Architecture Journal, 2017



Smart-Color: Color-interactive Device Design Based on Programmable Physical Color-changing Materials and Motion Capture Technique | [Link](#)

Chao Yuan, Liu Yang, Xiao Zhang, Song Qiu

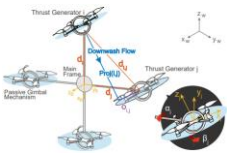
HCII, 2022



Nonintrusive Load Monitoring System for Decarbonization of Built Environment Based on Deep Learning | (Received, to be published)

Liu Yang, Wenbo Wu, Xiao Liu

CCES, 2022



Downwash-aware Control Allocation for Over-actuated UAV Platforms | [Link](#)

Yao Su*, Chi Chu*, Meng Wang, Jiarui Li, Liu Yang, Yixin Zhu, Hangxin Liu

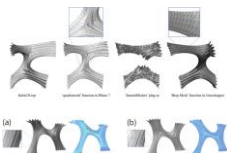
IEEE IROS, 2022



Design and Fabrication of Formwork for Shell Structures Based on 3D-printing Technology | [Link](#)

Zhang Xiao, Yuan Chao, Yang Liu, Yu Peiran, Ma Yiwen, Qiu Song, Guo Zhe and

Yuan Philip F., ECAADE, 2021



Topology Reconstruction of a Discontinuous B-rep Geometry by Using Form Finding Method | [Link](#)

Yuan Chao, Zhang Xiao, Zeng Shaoting, Yang Liu, Zhao Zhilong, Qiu Song

ECAADE, 2021



Avenue of Qingdao West Coast New Economic Zone Scenic Spot Planning |

[Link](#)

Cao Wei, Xu Shiteng, Yang Liu

2016

TEACHING



How to Make (Almost) Anything TA
Neil Gershenfeld
Parametric design and programmable materials

MIT
2022/9



Tsinghua Hackathon Lecturer
Danqing Shi
Talk - Construction of Space Architecture & Deployable Structure

UN-THU
2022/11



Illustration Design TA
Gemeng Zhang
Graphics design and VI design theory

THU
2021/9



UNITED NATIONS
SUSTAINABLE
DEVELOPMENT
GROUP

UN SDG× Tsinghua University Hackathon Lecturer
Derek Wells
Space art design seminar - Space Architecture Lecture

UN-THU
2021/3



Theory and Design of Visual Communication Symbols TA
Gemeng Zhang
Graphics design and VI design theory

THU
2020/9



Design Strategy and Management TA
Quan Ma
Design strategy and management theory

THU
2020/9



Brand Communication and Design TA
Jun Cai
Brand design theory and practice

THU
2020/3



Basis of Design Morphology TA
Song Qiu
Morphology research and design theory teaching

THU
2020/3



Tsinghua University Parametric Design Workshop Lecturer & TA
Gang Song
Parametric design in interactive landscape

THU
2018/6



Robot Arm and Media Translation TA
Gang Song
Robot arm control and parametric art teaching

SCUT
2016/9



FabAcademy X China Lecturer & TA
Jeff Ding
How to Make (Almost) Anything - HTML, parametric design, electronics, branding, etc.

TJU
2016/8

EXPERIENCE

BIGAI - Robotics Group Tech-Art R&D, soft robotics and Design Morphology Theory	2021 - 2022
Microsoft Research Asia (MSRA) Tech-Art R&D, IoT/HoloLens/Microsoft Duo development, Hackathon/Incubator	2019 - 2021
VANKE - the world's Top 500 Enterprises PM of Product portfolio, UX/UR, Curate and arrange exhibitions, etc.	2017 - 2017
Architectural Design and Research Institute of SCUT Concept design, parametric modeling, typography	2016 - 2019
HHDFUN(Beijing) – Parametric Architecture Design Studio Concept design, Modeling, rendering, typography	2015 - 2016

PROJECT

RESEARCH

Trans-Medium Morphing Material/Structure Morphology design method research of Trans-medium morphing materials/structures	2022
FibeRobo: Fabricating 4D Fiber Interfaces Research on Shape grammar of programmable morphing linear Liquid Crystal Elastomers controlled by thermal environment	2022
LineUP! Research of Ambient Thermal Responsive Self-Assembling Structure	2022
TangiGumball A physical interface to express three dimensional movements in virtual world.	2022
Prismo Research on transformable light and shadow based on prismatic structure	2022
Smart-Color: Color-interactive device design Research on programmable physical color-changing materials and motion capture	2021
Topology Reconstruction of a Discontinuous B-rep Geometry Research on form finding method	2020
Additive Manufacturing of Complex Shapes for Construction Research on concrete 3D printing with robot arm and parametric algorithm	2019
Programmable Material Research and Experiment Research on topology and programmable biomaterial 3D printing	2018

ARCHITECTURE

Foxconn Factory Wisconsin, US VR Tech-Designer, Exhibition Center of Foxconn Factory (Wisconsin), US	2018
Co-working Space, Singapore Modeling, rendering, typography	2018
Qilu Medical University Campus Planning & Library Design, China Concept design, Rhino modeling, typography	2018
Longhu Finance Center Comprehensive Art Gallery and Museum, China Concept design, Rhino modeling, typography	2017
Changsha International Conference Center, China Sketch & Concept design, parametric modeling, Elevation design	2017
Guangzhou Changlong Group Office Headquarters, China SketchUp modeling, rendering, typography	2017
Shenzhen Xiaomeisha New Ocean World and Hotel, China Modeling, rendering, typography, cover design	2018
Lanzhou Qilihe Pengjiaping Central Ecological Park Nonlinear modeling, draw analysis diagram, rendering, typography	2015
Shanghai Xintiandi Grand Gourmet Flagship Store GH parametric modeling, rendering, typography	2015

EXHIBITION

Deployable Knitting Pavilion Artist, CAUP Gallery, Shanghai, China	2021
AINFO (Discrete matrix dynamic interactive art installation) Artist, National Museum of China, Beijing, China	2019
Ascending City (VR Architecture) Assistant curator & Artist, UABB Virtual Biennale, Shenzhen & Hongkong, China	2019
Composite Programmable Architectural Biomaterials Artist, CAUP Gallery, Shanghai, China	2018
Foxconn Technology Exhibition VR Tech-Designer, Exhibition Center of Foxconn Factory (Wisconsin), US	2018
Trans- (3D Printing Body Architecture) Artist, CAUP Gallery, Shanghai, China	2017
Flying Rain Bottle & RainBo(w)x & Green Breath & Bamboo Matrix Artist, Yangcheng Lake Landscape Art Festival, Jiangsu, China	2016
The Reinterpretation of Robot Arm Assistant curator & Artist, JSDesign Museum, Guangzhou, China	2016
Nuclear City Ruins Playground 2.0 Artist, West Bund Museum, Shanghai, China	2016
Nuclear City Ruins Playground 1.0 Artist, Central Academy of Fine Arts (CAFA) Gallery, Beijing, China	2016
Vulcan (the World largest 3D Printing Installation in 2016) Artist, Art Center of Parkview Green Fangcaodi, Beijing, China	2015

TALK & NEWS

- 2022 This Decade, Peer Pilot | Recap of National Scholarship Winner Share | [Link](#)
- 2022 Design CosMorph | From Shape-Changing Toys to Morphing Space Architecture | [Link](#)
- 2022 Nonintrusive Load Monitoring System for Decarbonization of Built Environment Based on Deep Learning Algorithm
- 2022 The Construction Methods of Space Architecture
- 2021 Dynamic Architecture: Morphologic Study of Morphing Structure and Space
- 2021 Color-interactive Device Design: Based on Programmable Physical Color-changing Materials and Motion Capture Technique
- 2020 The Hitchhiker's Guide to Space Architecture 2020 | [Link](#)
- 2019 Research on Generation of Youth Apartment Plan Based on Deep Learning
- 2018 Interview | Liu YANG, From Ex-slashie Youth To Anti-Slashes | [Link](#)
- 2016 Design of 404 Nuclear Ruins Theme Park Based on AR/VR Technology | [Link](#)

EVENT

HACKATHON

- 2022 MIT Product Hack
- 2021 UN×Tsinghua SDG Hack
- 2020 Microsoft Global Hack
- 2018 PIX Hackathon × Guiyang
- 2017 Innovation & Entrepreneurship International Competition × Shenzhen
- 2017 AEC Hackathon × Shanghai
- 2016 HackUST×Hongkong
- 2016 Cross-strait Youth Maker Competition

WORKSHOP

- 2019 ENSAPL AMoC Pre-PhD Scientific Program
- 2018/2017 Tongji University Digital Future
- 2017/2015 Tsinghua University Parametric Design Summer School
- 2015 LCD 3D Printing Workshop
- 2015 Narrative Architecture Design Workshop

SKILL

- Computation: Grasshopper, Python
- 2D: Photoshop, Illustrator, InDesign, AutoCAD
- 3D: Rhino, Revit, SketchUp
- Smart Hardware: Arduino, Sensor, Actuator
- Rendering: Keyshot, Lumion, V-ray
- Video: Adobe Premiere, After Effects
- Communication
- Leadership
- Cooperation
- Easygoing
- Inclusive
- Spirit of exploration