

# Teng Teng (滕腾)

Researcher, Designer

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Portfolio website: [ttistengteng.com](http://ttistengteng.com)

Teng Teng is currently a doctoral student and research fellow at the University of Pennsylvania, School of Design.

He is an interdisciplinary researcher as well as an experienced architect. He holds two Master of Science degrees from Cornell University and the University of Washington. He was formerly appointed as a research associate in Jenny Sabin Lab at Cornell University and a lecturer in Shanghai Institution of Visual Art.

As a researcher, his primary research interests reside in Robotics, Computational Design, and Human-Computer Interaction. He is particularly interested in HCI issues in the design and fabrication process, focusing on providing intelligent and instructive computational tools for designers and makers. He has been widely published related articles across North America, Europe, and Asia.

Teng was also a licensed architect. He worked at a Seattle-based renowned international architecture firm for several years as a project architect and computational leader. He earned various practical experiences in conceptual design to construction administration from more than twenty large-scale mixed-use, retail, and residential projects across Asia, Mid East, and North America.

## Education

2021-2025 **PhD in Architecture**, University of Pennsylvania, Robotics and Computational Design.

2019- 2021 **Master of Science**(MS) Cornell University, Matter Design Computation.

2017-2018 **PhD in Human Behavior and Design**, Cornell University, Design and Environmental Analysis (not complete).

2012-2014 **Master of Science** (MS) University of Washington, Computational Design.

2008-2012 **Bachelor of Architecture** (BE) Shanghai University, Architecture.

2007-2008 **Bachelor of Arts**, Shanghai University, Oil Painting (not complete).

## Selected Publications

**Teng, Teng** and Sabin, Jenny (2021), "The Design and 4d printing of Epithelial cell-inspired Programmable Surface Geometry as Tangible User Interface" in PROJECTIONS: 26th International Conference of the Association for Computer-Aided Architectural Design Research in Asia (CAADRIA2021)- 29 March to 1 April 2021.

**Teng, Teng**, Jia, Mian and Sabin, Jenny. (2020), "Scutoid Brick - The Designing of Epithelial cell inspired-brick in Masonry shell System" in Anthropologic: Architecture and Fabrication in the cognitive age - Proceedings of the 38th eCAADe Conference - Volume 1, TU Berlin, Berlin, Germany, 16-18 September 2020, pp. 563-572

**Teng, Teng**. and Sabin, Jenny. (2020), "PICA - A Designer Oriented Low-Cost Personal Robotic Fabrication Platform for Sketch Level Prototyping" in RE: Anthropocene, Design in the Age of Humans - Proceedings of the 25th CAADRIA Conference - Volume 2, Chulalongkorn University, Bangkok, Thailand, 5-6 August 2020, pp. 473-483

Kong, M., Zhang, J., Dang, T.Q., Hedge, A., **Teng, T.**, Carter, B., Chianese, C., and Khalifa, H.E., 2019. "Micro-environmental control for efficient local cooling: Results from manikin and human participant tests". Building and Environment, 160, p.106198.

**Teng, Teng**. and Li, Qinying. (2017) "Integrated Adaptive and Tangible Architecture Design Tool" in ShoCK! - Sharing Computational Knowledge! - Proceedings of the 35th eCAADe Conference - Volume 1, Sapienza University of Rome, Rome, Italy, 20-22 September 2017, pp. 619-628.

**Teng, Teng**, and Johnson, Brian R. (2015) "Transformable Physical Design Media" in Real Time - Proceedings of the 33rd eCAADe Conference - Volume 1, Vienna University of Technology, Vienna, Austria, 16-18 September 2015, pp. 45-54.

**Teng, Teng** and Johnson, Brian R. (2014) "Inspire: Integrated spatial gesture-based direct 3D modeling and display" in Design Agency [Proceedings of the 34th Annual Conference of the Association for Computer-Aided Design in Architecture (ACADIA) ISBN 9781926724478] Los Angeles 23-25 October, 2014), pp. 445-452

"Rhinoceros & Grasshopper Parametric Modeling" (Editor Team, in Chinese) Chinese Architectural Professional Textbooks for the 11th Five-Year Plan ISBN: 9787560972411

## Academic Appointments

2021.8 -present **Research Fellow**, Stuart Weitzman School of Design, University of Pennsylvania.

2018.7-2021.5 **Research Associate**, Jenny Sabin Lab, Cornell University

Lead Robosense project team to investigate interactive robotic 3d printing workflow

2016-2017 **Leading Faculty**, Computational Design Group, Shanghai Institute of Visual Art  
Founded and co-lead a Computational/Interaction Design Laboratory

2015-2017 **Lecturer**, Design and Design Technology, School of Design, Shanghai Institute of Visual Art,  
Undergraduate thesis, Responsive Environment, Parametric Design, Digital Design and Fabrication Workshop, Design Studio,

2013-2014 **Teaching Assistant**, Design Machine Group, University of Washington  
3D Modeling & Rendering, Graphics Programming, Responsive Environment,

2013-2014 **Research Assistant**, Design Machine Group, University of Washington

2011-2012 **Student Teaching Assistant**, Shanghai University  
Parametric Design

2010-2012 **Student Teaching Assistant**, Tongji University  
Parametric Design

## Funded Research/Academic Project(as PI)

2016-2017 Computational Design Laboratory startup  
Startup a computational design research group in School of Design, Shanghai Institute of Visual Art, provides students related courses and engages them with the computational design research project.  
Fund: Shanghai Municipal Education Commission, ¥ 14,000,000 (approx. \$2,000,000)  
Collaborating Faculty: Prof. Hongjiang Wang, Weida Huang (SIVA)

2016-2017 Dynamic Space  
The research develops a set of responsive environmental installations for student's workplaces.  
Fund: Shanghai Institute of Visual Art, Junior Faculty Grant Program ¥ 30,000 (approx. \$4,400)  
Collaborating Faculty: Prof. Hongjiang Wang, Weida Huang (SIVA)

2016-2017 The Investigation of Creative Design Theory and Methodology  
This project researches the emerging technologies related to Computational Design. And how to introduce the new technologies to the students with an art background.  
Fund: Shanghai Municipal Education Commission, ¥ 50,000 (approx. \$7,300)  
Collaborating Faculty: Weida Huang (SIVA)

2016 Digital Practice International Workshop  
This two-week workshop explored teaching art students with digital design and fabrication technologies. Three full-sized design and fabrication projects were nursed to completion with groups of energetic students from different design fields.  
Fund: University of Washington. Shanghai Institute of Visual Art, ¥ 100,000 (approx. \$14,500)  
Collaborating Faculty: Prof. Brian R. Johnson, Prof. Kimo Griggs

## Scholarships, Awards, Honors

2021 Weitzman School of Design Research Fellowship, University of Pennsylvania  
2017 Cornell Graduate Student Travel Grant, Cornell University  
2017 Cornell Graduate Student Fellowship, Cornell University  
2014 Design Agency Student Scholarship, ACADIA  
2012 Bronze Award, National University Students of Architectural and Environmental Design Academic Annual Exhibition  
2012 Best Undergraduate Honors Thesis Award, Shanghai University  
2011 First Prize, National College Students Engraving Exhibition

## Invited Talks and Demonstration

2020.8 The Interaction in Design and Robotic Fabrication  
Invited Online Lecture at Digital Future Workshop, Tongji University, China

2019.10 Enhancing Design Experience Via Novel Design Media.  
Invited Online Lecture at SHANGHAI DESIGN WEEK, Shanghai, China

2016.3 The Interaction of Design  
Invited Lecture at Shanghai Institute of Visual Art, Shanghai, China

2015.2 Introducing an Intuitive Design Media into Design Space  
Public Talk at LMN Architects Seattle office, Seattle, USA

2014.12 Innovation of Design Media  
Public Lecture in Shanghai Institute of Visual Art, Shanghai, China

## Other Academic Experience

Program Committee and Reviewing

CAADRIA 2021 (The 2021 annual conference for Computer-Aided Architectural Design Research in Asia), Paper Reviewer  
CAADRIA 2020 (The 2020 annual conference for Computer-Aided Architectural Design Research in Asia), Best Presentation  
Committee Member

AMC CHI 2020, Paper reviewer for the Track of Design Tools.

## Professional Experience

2013.7 – 2016.12 **Project Architect & Leading Design Technologist**, CallisonRTKL, Seattle, USA.

Co-founded a 6 staffs computational design group that provides technical support to 5 offices across the company's global branches including Seattle, Los Angeles, London, Dubai, and Beijing. In-Depth worked with the Global Commercial chief designer and project team on nine schematic design projects and 2 design development projects.

2013.10 – 2014.3 **Architectural Designer, Schemata Workshop** (Part-time), Seattle, USA

Worked with the Chief Designer and project team on 2 Seattle city projects. Participated in conceptual design and field surveys.

2010.10– 2012.8 **Design Technologist**, Callison (Part-time), Shanghai City, China

Worked in Callison China for two years as an independent design technologist and a key member of the swift team.

Participated in 4 large scale commercial projects through SD, DD, and CD. 3 of 4 projects are currently under construction. Offered computational support on project form-finding, massing study, facade study, modular optimization, sustainable design, and 3d modeling.

Provided in-house 3D training program, trained over 30 employees in Rhino, Grasshopper, Ecotect, and Revit.

2009 – 2012, **Founding Partner**, NCF Parametric Design Studio, Shanghai City, China

Co-Founded NCF (a charter member of Digital Architecture Design Association - Architectural Society of China), the largest computational design platform in China in 2009. Established NCF internet forum ([www.ncf-china.com](http://www.ncf-china.com)) for architecture students, professional architects as well as computational designers. Attracted over 70,000 members, get viewed over 6,000,000 times by the end of 2014. Provided 6 design firms with technical support and professional training. Organized and instructed 5 nationwide commercial workshops and training camps, trained over 100 participates during 2011- 2012. Participated and produced 8 versions of online E-books of Grasshopper, Rhinoceros, Maya, over 1000 minute's video tutorials; translated over 500 pages of tutorials from English to Chinese. Participated in a national architecture textbook editing. Organized and hosted 5 nationwide public professionals' social activities with over 800 participates through 2009 to 2012.

## Skills

### Programming Languages and Libraries

Proficient in Python, Grasshopper, Rapid, ROS, Processing, HTML, CSS, Arduino, physical computing, and Microcontroller Programming.

Experienced in C#, Java, JavaScript, and WebGL.

### Design Skills

Proficient in Architectural Design, Computational Design, Interaction Design. Graphic Design, UI design, 3D Modeling, Digital Fabrication, Rendering, Animation,

Experienced in Building Information Modeling, Energy Modeling.

### Design Tools

Proficient in 3D: Rhinoceros, SketchUp, 3ds Max, Solidworks,; 2D: Adobe Photoshop, Sketch, Figma, Illustrator, InDesign, Dreamweaver, and Premiere.

Experienced in 3D: Revit, Maya, CryEngine, V-ray for 3ds Max, Digital Project.

Languages

Mandarin, Native; English, proficient; Italian, Basic; Cantonese, Basic

### Fine Art

Good at classic chalk, oil paintings, sketch, engraving, sculpture.