

Steel & Light Structure,  
State Key Laboratory of Disaster Reduction in Civil  
Engineering & Department of Structural Engineering,  
College of Civil Engineering,  
Tongji University.

1239 Siping Road, Tongji University,  
Shanghai 200092, China  
E-mail: yxnpng@tongji.edu.cn  
Tel. +86 18042656397



## PERSONAL INFORMATION

**Name:** Shengxin Yu Date of birth: April 14, 2000 (Liaoning, China) Nationality: China  
**Homepage:** [Yu Shengxin's Website \(shengxinyu.netlify.app\)](https://shengxinyu.netlify.app)  
**Master Supervisor:** Prof. Cheng Fang (<https://faculty-civileng.tongji.edu.cn/fangcheng/en/index.htm>)  
**Associate Supervisor:** Assistant Prof. Yue Zheng (<https://faculty-civileng.tongji.edu.cn/zhengyue/en/index.htm>)

EDUCATION<sup>1</sup>

**2021.9-** **Master Candidate** Department of Structural Engineering, Tongji University, China  
GPA: **4.87 / 5.0**  
**2017.9-2021.6** **Bachelor Degree** School of Civil Engineering, Dalian University of Technology, China  
Average Score: **89 / 100 (top 3%)**  
**English Proficiency** **IELTS (Academic Module): 6, preparing for a higher score**

## HONORS AND AWARDS

Outstanding Students of Tongji University for the Academic Year 2022-2023 2023.11  
**National Scholarship for Postgraduate Students** for the Academic Year 2022-2023 2023.10  
**Outstanding Graduates of Liaoning Province** 2021.06  
Outstanding graduates of Dalian University of Technology 2021.06  
**Large special scholarship** (only 38 people in the school obtained it, accounting for less than 0.2%) 2020.10  
Outstanding Three Good Students of the School 2018.10&2020.10  
Study First Class Scholarship 2018.10&2020.10  
Science and Technology Innovation Scholarship 2020.10  
Cultural and Sports Activity Scholarships 2020.10  
Social Practice Scholarship 2020.10  
Honorable mention for the Mathematical Contest in Modeling (MCM) 2020.04

## RESEARCH EXPERIENCE

**2022.9-** **Design, Experiment and Simulation of Novel Multi-stage Isolation Bearings**  
Supervisor: Prof. Cheng Fang & Assistant Prof. Yue Zheng, Tongji University  
Main contribution: Fully responsible for structural design, material property testing, quasi-static testing, ABAQUS simulation, OpenSees simulation, and related tasks, etc.  
Research Findings: **Journals** [\[1\]-accepted](#) and [\[2\]-ongoing](#), **Patents** [\[1\]-authorized](#) and [\[2\]-ongoing](#)

**2021.9-2022.8** **Deep Learning-Based Computer Vision for Health Monitoring in Civil Engineering**  
Supervisor: Prof. Cheng Fang & Master student Xinyue Yang, Tongji University  
Main contribution: Study deep learning code, reconstruct models, and write comprehensive review, etc.  
Research Finding: **Journal** [\[3\]-accepted](#)

**2023.1-** **Research on Mechanical Properties of Fe-SMA Components**  
Supervisor: Prof. Cheng Fang & Doctoral student Zhexi Zhang, Tongji University  
Main contribution: Engage in theoretical learning, prepare test specimens, and participate in numerous experiments, etc.  
Research Findings: **Journals** [\[4\]-revised manuscript submitted](#) and [\[5\]-ongoing](#)

**2023.8-** **Study on the Seismic Performance of Bridge Systems with Self-centering Ring Spring Dampers**  
Supervisor: Prof. Cheng Fang, Tongji University  
Main contribution: Engage in experimental research, utilize the OpenSees for system analysis, and employ Visual Studio for the development of novel material models, etc.  
Research Finding: **Journal** [\[6\]-ongoing](#)

**2023.9-** **Study on the Flexural Performance and Intensity Prediction of Sandwich Structures**

<sup>1</sup>full official transcript found in: [Attachment Transcript for Graduate Student.pdf](#) & [Attachment Bachelor's Academic Transcript \(Credit System\).pdf](#), respectively.

	<p>Collaborator: Doctoral student Yuelin Zhang, Tongji University</p> <p>Main contribution: Responsible for conducting ABAQUS simulation, establishing predictive model, investigating parameters, and writing research papers, etc.</p> <p>Research Finding: <b>Journal</b> <a href="#">[7]-ongoing</a></p>
2023.6-2023.7	<p><b>Design and Simulation of Gravity Blocks Made from Ultra-High Performance Concrete (UHPC)</b></p> <p>Supervisor: Assistant Prof. Yue Zheng, Tongji University</p> <p>Main contribution: Conducting the design of UHPC gravity blocks and employing ABAQUS for modeling, calibrating the UHPC plastic damage CDP model, calculating earth pressure, etc.</p> <p>Research Outcome: Successfully delivered the project in accordance with Party A's design requirements.</p>
2019.9-2020.4	<p><b>In-depth Fusion and Intelligent Early Warning of Multivariate and Multi-field Data for Extra-Large Landslides</b></p> <p>Supervisor: Prof. Huaifu Pei, Dalian University of Technology</p> <p>Main contribution: Study the theory of novel fiber optic monitoring technologies and produce patent diagrams, etc.</p> <p>Research Outcome: The school-level college student innovation and entrepreneurship training program was successfully concluded.</p>
2018.9-2019.4	<p><b>High-performance Hybrid Fiber-reinforced Cement Based Materials</b></p> <p>Supervisor: Prof. Mingli Cao, Dalian University of Technology</p> <p>Main contribution: Responsible for calculating the bending and tensile strength of components, calibrating the dimensions of test specimens, and extracting parameters, etc.</p> <p>Research Outcome: The provincial college student innovation and entrepreneurship training program was successfully concluded.</p>

JOURNAL & PATENT PUBLICATIONS

Journals:	(Note: The gray font indicates that the paper is about to be submitted or is being written.)
[1]	Shengxin Yu, Yue Zheng, Cheng Fang, Zhilu Wang. (2024) Multi-stage damping plate-restrained bearings: concepts, experimental validation, and numerical analysis. <i>Engineering Structures</i> , 300, 117215. doi: <a href="https://doi.org/10.1016/j.engstruct.2023.117215">https://doi.org/10.1016/j.engstruct.2023.117215</a> (Accepted)
[2]	Ongoing: Seismic performance assessment and numerical investigation of bridges systems with novel damping plate-restrained bearings. (Preparing to submit the manuscript to <i>Earthquake Engineering &amp; Structural Dynamics</i> as the <b>first author</b> before Jan. 2024)
[3]	Cheng Fang, <b>Shengxin Yu (Corresponding author)</b> , Yonggang Li, Wanglong Jia, Pengbo Yang, Xinyue Yang. (2024) Deep Learning-Based Computer Vision for Health Monitoring in Civil Engineering. <i>Journal of Tongji University (Natural Science)</i> . (EI, in Chinese, accepted)
[4]	Zhexi Zhang, Cheng Fang, Qun He, Yuanmu Li, <b>Shengxin Yu</b> , Haojie Niu. Low Temperature Mechanical Behavior of Fe-SMA for Structural Damping. <i>Journal of Structural Engineering (ASCE)</i> (Revised Manuscript Submitted)
[5]	Ongoing: A feasibility study of using novel SMA components for enhancing both structural robustness and seismic resilience. (Preparing to write and plan to submit the manuscript to <i>Journal of Structural Engineering (ASCE)</i> as the <b>second author/corresponding author</b> before Feb. 2024.)
[6]	Ongoing: Seismic resilience of bridge systems with self-centering energy-dissipative SMA restrainers. (Preparing to write and plan to submit the manuscript to <i>Soil Dynamics and Earthquake Engineering</i> as the <b>first author</b> before Apr. 2024.)
[7]	Ongoing: Flexural performance and intensity prediction of sandwich structures. (Preparing to write and plan to submit the manuscript to <i>Ocean Engineering</i> as the <b>first author</b> before Jun. 2024.)

**Patents:**

[1] Yue Zheng, Cheng Fang, Zhilu Wang, **Shengxin Yu**, Chen Cao, Xin You, Chuansheng Sun et al. (2023) A damping plate-based energy-dissipation buffer limited isolation bearing. (*China Utility Model Patent*, CN218861764U, authorized)

[2] Yue Zheng, Cheng Fang, Zhilu Wang, **Shengxin Yu**, Chen Cao, Xin You, You Dong et al. (2023) A design method for seismic isolation bearing of assembly shear plate with three-stage energy dissipation, buffering, and limiting. (*China Invention Patent*, 202211368630.5, publication status)

---

**SCHOOL & SOCIAL ACTIVITIES**

Participate in Reviewing Journals: Case Studies in Construction Materials, Structure and Infrastructure Engineering, Smart Materials and Structures

Student Work and Community Service: [2019.10-2020.04] Community service in Dalian, China; [2018.03-2018.07] Deputy Director of the Faculty New Media Center; [2017.10-2018.02] Member of the Faculty Publicity Section.

Voluntary Activities: I like to help others and meet new friends, and I have participated in various volunteer activities.

---

**ABILITIES**

Software Skills: Abaqus, OpenSees, MATLAB, Python, AutoCAD, SOLIDWORKS, Origin, etc.

Computer Language: Python Language, TCL Language, C Language, etc.