Steel & Light Structure,
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PERSONAL INFORMATION

Name:	**Shengxin Yu** Date of birth: April 14, 2000 (Liaoning, China) Nationality: China
Homepage:	Yu Shengxin's Website (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[1]

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**

[1]**full official transcript found in: Attachment_Transcript for Graduate Student.pdf & Attachment_Bachelor's Academic Transcript (Credit System).pdf, respectively.**

Collaborator: Doctoral student Yuelin Zhang, Tongji University
Main contribution: Responsible for conducting ABAQUS simulation, establishing predictive model, investigating parameters, and writing research papers, etc.
Research Finding: **Journal** [7]-ongoing

2023.6-2023.7 **Design and Simulation of Gravity Blocks Made from Ultra-High Performance Concrete (UHPC)**

Supervisor: Assistant Prof. Yue Zheng, Tongji University
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.
Research Outcome: Successfully delivered the project in accordance with Party A's design requirements.

2019.9-2020.4 **In-depth Fusion and Intelligent Early Warning of Multivariate and Multi-field Data for Extra-Large Landslides**

Supervisor: Prof. Huafu Pei, Dalian University of Technology
Main contribution: Study the theory of novel fiber optic monitoring technologies and produce patent diagrams, etc.
Research Outcome: The school-level college student innovation and entrepreneurship training program was successfully concluded.

2018.9-2019.4 **High-performance Hybrid Fiber-reinforced Cement Based Materials**

Supervisor: Prof. Mingli Cao, Dalian University of Technology
Main contribution: Responsible for calculating the bending and tensile strength of components, calibrating the dimensions of test specimens, and extracting parameters, etc.
Research Outcome: The provincial college student innovation and entrepreneurship training program was successfully concluded.

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. ***Engineering Structures***, 300, 117215. doi: https://doi.org/10.1016/j.engstruct.2023.117215 (Accepted)

[2] Ongoing: Seismic performance assessment and numerical investigation of bridges systems with novel damping plate-restrained bearings. (Preparing to submit the manuscript to ***Earthquake Engineering & Structural Dynamics*** as the **first author** before Jan. 2024)

[3] Cheng Fang, **Shengxin Yu (Corresponding author)**, Yonggang Li, Wanglong Jia, Pengbo Yang, Xinyue Yang. (2024) Deep Learning-Based Computer Vision for Health Monitoring in Civil Engineering. ***Journal of Tongji University (Natural Science)***. (EI, in Chinese, accepted)

[4] Zhexi Zhang, Cheng Fang, Qun He, Yuanmu Li, **Shengxin Yu**, Haojie Niu. Low Temperature Mechanical Behavior of Fe-SMA for Structural Damping. ***Journal of Structural Engineering (ASCE)*** (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 ***Journal of Structural Engineering (ASCE)*** as the **second author/corresponding author** 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 ***Soil Dynamics and Earthquake Engineering*** as the **first author** before Apr. 2024.)

[7] Ongoing: Flexural performance and intensity prediction of sandwich structures. (Preparing to write and plan to submit the manuscript to ***Ocean Engineering*** as the **first author** 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, Pycharm, AutoCAD, SOLIDWORKS, Origin, etc.
Computer Language:	Python Language, TCL Language, C Language, etc.