Yang Yang

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Personal Website Linkedin Google Scholar

Education

University of Southern California *Los Angeles, United States*
PhD in Mechanical Engineering *Aug 2025 – Present*
Advisor: Hangbo Zhao

Sichuan University *Chengdu, China*
B.Eng in Mechanics with Honors *Sep 2021 – Jun 2025*

- GPA: 3.83/4.0 (90.31/100)
- Courses: Theoretical Mechanics, Material Mechanics, Mathematical Methods in Engineering, Continuum Mechanics, Structural Mechanics, Fluid Mechanics, Computational Mechanics, Experimental Mechanics, Vibration Mechanics

Research Interests

My research interests are in Soft Robotics, Sensors, and Mechanics. They encompass tactile sensing, computational mechanics, and multi-model sensors. I am particularly interested in the design of new types of sensors and their application in soft robotics.

Experience

The Chinese University of Hong Kong *Hong Kong SAR, China*
Research Assistant, advised by Hongliang Ren *Oct 2024 – May 2025*

Tsinghua University *Shenzhen, China*
Summer Research Intern, advised by Wenbo Ding *Jun 2024 – Aug 2024*

Sichuan University *Chengdu, China*
Teaching Assistant, advised by Hong Zhang *Feb 2024 – Jun 2024*

Shanghai Jiao Tong University *Shanghai, China*
Summer Research Intern, advised by Daolin Ma *Jun 2023 – Aug 2023*

Honors and Awards

USC Viterbi School of Engineering Graduate School Fellowship	*2025*
Top 100 Undergraduate Students of Sichuan University	*2025*
Second Prize of Academic Scholarship at Sichuan University	*2024*
First Prize of Sichuan Province Mechanics Competition Individual Race	*2023*
First Prize of Sichuan Province Mechanics Competition Group Race (Leader)	*2023*
First Prize of Academic Scholarship at Sichuan University	*2023*
Outstanding Students of Sichuan University	*2023*

Publications

Biomimetic multimodal tactile sensing enables human-like robotic perception

S. Li†, T. Wu†, J. Xu†, Y. Huang, Z. Zhang, H. Zhao, Q. Xu, Z. Wang, L. Ye, **Y. Yang**, C. Lyu, S. Mu, X. Wang, Z. Xie, C. Wu, X. Yu, and W. Ding

Nature Sensors, vol. 1, pp. 52–62, 2026, doi: 10.1038/s44460-025-00006-y.

Conformable Vision-Based Tactile Sensor with Enhanced Soft Elastomer Design for Palpating Irregular Anatomical Surfaces

Y. Yang, T. Zhang, Y. Wang, W. Yue, T. Liu, and H. Ren

Procedia Computer Science, vol. 271, pp. 79–85, 2025, doi: 10.1016/j.procs.2025.10.114.

Vitire: A Bimodel Visuotactile Tire with High-Resolution Sensing Capability

S. Li†, J. Xu†, T. Wu, **Y. Yang**, Y. Chen, X. Wang, W. Ding, and X.-P. Zhang

IEEE/ASME Transactions on Mechatronics, pp. 1–11, 2025, doi: 10.1109/TMECH.2025.3566394.

Three-dimension Tip Force Perception and Axial Contact Location Identification for Flexible Endoscopes using Tissue-compliant Soft Distal Attachment Cap Sensors

T. Zhang†, **Y. Yang**†, Y. Yang, H. Gao, J. Lai, and H. Ren

in *Proceedings of the 2025 IEEE International Conference on Robotics and Automation (ICRA)*, pp. 538–544, 2025, doi: 10.1109/ICRA55743.2025.11128801.

Machine Learning-and Finite Element-Based Temperature-and Rate-Dependent Plasticity Model: Application to the Tensile Behavior

B. Zhang, **Y. Yang**, H. Wu, Y. Zhang, Q. Wang, H. Zhang, Y. Liu, and Q. Wang

Journal of Materials Engineering and Performance, vol. 34, pp. 14975–14986, 2025, doi: 10.1007/s11665-024-10167-5.

A deep learning approach for low-cycle fatigue life prediction under thermal–mechanical loading based on a novel neural network model

Y. Yang, B. Zhang, H. Wu, Y. Zhang, H. Zhang, Y. Liu, and Q. Wang

Engineering Fracture Mechanics, vol. 306, Art. no. 110239, 2024, doi: 10.1016/j.engfracmech.2024.110239.

Skills

Programming: C++, Python

Platform/System: Finite Element Method, SoildWorks, MATLAB, Ubuntu, Linux, VS Code, Gazebo, ROS

Languages: Mandarin (Native), English (Fluent)