XING YIN 銀星

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College of Civil Engineering and Architecture, Zhejiang University, Hangzhou 310058, China

CURRENT POSITION

Zhejiang University Hangzhou, China

Postdoctoral Fellow Oct. 2023-Present

Advisor: Prof. Qinghua Li (Recipient of the National Science Fund for Distinguished Young Scholars)

EDUCATION

Zhejiang University Hangzhou, China

PhD, Structural Engineering Sep.2023

Dissertation: "*Impact Performance of High Toughness Concrete - Reactive Powder Concrete Composite Slabs*"

Advisor: Prof. Shilang Xu (Member of Chinese Academy of Sciences)

Ocean University of China Qingdao, China

BEng, Civil Engineering Jun.2017

RESEARCH INTERESTS

Dynamic mechanics behaviours of engineering materials [e.g., dynamic fracture, and spallation, etc.]

Dynamic response of engineering structures [e.g., low-velocity impact, explosion, and penetration, etc.]

Constitutive models of cementitious materials [e.g., KCC, CSC, and RHT, etc.]

Advanced numerical approach [e.g., meshfree/particle method]

SELECTED GRANTS

The National Postdoctoral Program for Innovative Talent (China, 500 individuals per year) Jul.2024 – Oct.2025

Study on the Embedded Explosive Performance of High-Strength High-Toughness Concrete

Principal Investigator, Grant No. BX20240320

The National Key Research and Development Program for Young Scientists (China) Dec.2024 – Nov.2027

Design Theory and Protection Methods of Special Structural Materials for Cross-Strait Submerged Floating Tunnel

co-Principal Investigator, Grant No. 2024YFB3715100

WORKS IN PROGRESS

Explosion Protective Performance of Advanced Engineering Structures and Materials Oct.2023 - Oct.2025

FEATURED PUBLICATIONS

Yin, X., Li, Q.*, Chen, B., & Xu, S. (2023). An improved calibration of Karagozian & Case concrete/cementitious model for strain-hardening fibre-reinforced cementitious composites under explosion and penetration loadings. *Cement and Concrete Composites*, 137, 104911. (ESI Highly Cited Paper)

Yin, X., Li, Q.*, Wang, Q., Chen, B., Shu, C., & Xu, S. (2024). Mesoscale numerical investigation of dynamic spalling fracture in toughness concrete. *International Journal of Mechanical Sciences*, 264, 108826.

Yin, X., Li, Q.*, Xu, X., Chen, B., Guo, K., & Xu, S. (2023). Investigation of continuous surface cap model (CSCM) for numerical simulation of strain-hardening fibre-reinforced cementitious composites against low-velocity impacts. *Composite Structures*, 304, 116424. (ESI Highly Cited Paper)

Yin, X., Li, Q.*, Wang, Q., Chen, B. & Xu, S. (2024). Near range explosion resistance of UHPFRC panels in wide scaled distances: Experimental study and stochastic numerical modelling. *International Journal of Impact*

Engineering. 192, 105028.

Yin, X., Li, Q.*, Wang, Q., Chen, B., & Xu, S. (2023). Experimental and numerical investigations on the stress waves propagation in strain-hardening fiber-reinforced cementitious composites: Stochastic analysis using polynomial chaos expansions. *Journal of Building Engineering*, 74, 106902.

Yin, X., Li, Q.*, Wang, Q., Reinhardt, H.-W., & Xu, S. (2023). The double-*K* fracture model: A state-of-the-art review. *Engineering Fracture Mechanics*, 277, 108988.

Yin, X., & Li, Q.*, (2025). Machine learning based damage prediction of ultra-high toughness cementitious composite panels under near range explosion. *Engineering Mechanics.* (in Chinese) Accept.

Hao, Y.[#], **Yin, X.**[#], Li, Q.*, Quan G., & Xu, S. (2025). Dynamic direct tensile behaviour of high-strength strain-hardening fibre-reinforced cementitious composites: Rate dependence, inertial effect, and ductile-brittle transition. *International Journal of Impact Engineering*, 202, 105309.

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