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High Performance Concrete, Fiber Reinforced Concrete, Reinforced Concrete, Seismic Design for RC Structures

期刊論文 (Journal Papers)

1. Marco Bonopera, **Wen-Cheng Liao**, Wisena Perceka (2022, Jan). Experimental-theoretical investigation of the short-term vibration response of uncracked prestressed concrete members under long-age conditions. *Structures*, 35, 260-273. <https://doi.org/10.1016/j.istruc.2021.10.093>. (SCI).
2. Jia-Rui Weng and **Wen-Cheng Liao*** (2021, Nov). Microstructure and shrinkage behavior of high-performance concrete containing supplementary cementitious materials. *Construction and Building Materials*, 308, 125045. (SCI).
3. **Wen-Cheng Liao***, Jenn-Chuan Chern, Ho-Cheng Huang, Ting-Kai Liu, and Wei-Yi Chin (2021, Nov). Establishment of analysis system and fast-access cloud-based database of concrete deformation. *Computers and Concrete*, 28(5), 441-450, <https://doi.org/10.12989/cac.2021.28.5.441>. (SCI).
4. **Wen-Cheng Liao**, Wisena Perceka, Li-Wei Tseng, and Duc-Tuan Nguyen (2021, Nov). Cyclic Behavior of High-Strength Fiber-Reinforced Concrete Columns under High Axial Loading Level. *ACI Structural Journal*, 118(6), 103-116. (SCI).
5. Kuang-Wu Chou, Lian-Gui He, Kevin Hsu, **Wen-Cheng Liao**, Chang-Wei Huang (2021, Oct). Application of an Unmanned Aerial Vehicle for Crack Measurement Using Image Calibration Supported by Laser Projectors. *Multiscale Science and Engineering*, DOI: 10.1007/s42493-021-00072-7.
6. Wisena Perceka, **Wen-Cheng Liao*** (2021, Aug). Experimental Study of Shear Behavior of High Strength Steel Fiber Reinforced Concrete Columns. *Engineering Structures*, 240, <https://doi.org/10.1016/j.engstruct.2021.112329>. (SCI).
7. Doan-Binh Nguyen, Wei-Sheng Lin and **Wen-Cheng Liao*** (2021, Jan). Long-Term Creep and Shrinkage Behavior of Concrete-Filled Steel Tube. *Materials*, 14(2), 295-318. (SCI).
8. Ying-Chiao Chiu, Po-Han Chen, **Wen-Cheng Liao** (2020, Sep). Impact of subtropical island climate on the appearance and aesthetics of white marble buildings. *Journal of Building Engineering*, 31, 101334. (SCI).
9. Wei-Hsiu Hu, **Wen-Cheng Liao*** (2020, Jun). Study of prediction equation for modulus of elasticity of normal strength and high strength concrete in Taiwan. *Journal of the Chinese Institute of Engineers*, 43(7):1-10, <https://doi.org/10.1080/02533839.2020.1771207>. (SCI)
10. **Wen-Cheng Liao***, Po-Shao Chen, Chung-Wen Hung and Suyash Kishor Wagh (2020, Jun). An

Innovative Test Method for Tensile Strength of Concrete by Applying the Strut-and-Tie Methodology. *Materials*, 13, 2776. (SCI).

11. Wisena Perceka, **Wen-Cheng Liao*** and Yung-Fu Wu (2019, Nov). Shear Strength Prediction Equations and Experimental Study of High Strength Steel Fiber-Reinforced Concrete Beams with Different Shear Span-to-Depth Ratios. *Applied Sciences*, 9(22), 4790; <https://doi.org/10.3390/app9224790>. (SCI).
12. **Liao, W*.**, Liu, K., and Yeh, C. (2018, Dec). Behaviors of New RC Bridge Columns Made of Highly Flowable Strain-Hardening Fiber-Reinforced Concrete (HF-SHFRC) under Cyclic Loads. *Journal of Testing and Evaluation*, <https://doi.org/10.1520/JTE20180091>. ISSN 0090-3973., 47(3). (SCI).
13. Louis Ge, Chien-Chih Wang, Chen-Wei Hung, **Wen-Cheng Liao** and Honghua Zhao (2018, Sep). Assessment of strength development of slag cement stabilized kaolinite. *Construction and Building Materials*, 184, 492-501. (SCI).
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15. **Wen-Cheng Liao**, Wei-Ru Su (2018, Jan). Implementation of Highly-Flowable Strain Hardening Fiber Reinforced Concrete in New RC Beam-Column Joints. *MATEC Web of Conferences*, 147, <https://doi.org/10.1051/mateconf/201814701003>.
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23. 胡瑋秀, 廖文正* (2019年12月)。台灣混凝土彈性模數折減對數項結構相關設計規範的影響。 *結構工程*, 34(2), 76-89。

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25. 陳振川, 廖文正*, 劉庭愷, 秦維邑 (2018 年 03 月)。台灣混凝土潛變收縮資料庫建置及特質分析。結構工程, 33(1), 103-116。
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研討會論文 (Conference Papers)

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2. W.C. Liao *, Y.J. Kuo and E.J. Liu (2019, Dec). A CONFINEMENT EFFICIENCY OF HOOKED STEEL FIBERS IN HIGH STRENGTH CONCRETE. 16th East Asia-Pacific Conference on Structural Engineering & Construction (EASEC16), Brisbane, Australia.
3. Wen-Cheng Liao*, Ho-Cheng Huang and Jenn-Chuan Chern (2019, Nov). Introduction to Analysis System and Fast-Access Cloud Database for Shrinkage and Creep. TCI 2019 Conference on Concrete Engineering: TCI-JCI Joint Symposium.
4. Wen-Cheng Liao and Jenn-Chuan Chern (2019, Sep). CODE DEVELOPMENT OF CONCRETE DEFORMATION IN TAIWAN BY ESTABLISHMENT OF ANALYSIS SYSTEM AND FAST-ACCESS CLOUD-BASED DATABASE. The 3rd ACF Symposium 2019, Sapporo Japan.
5. Wen-Cheng Liao (2019, Apr). Establishment of Analysis System and Fast-Access Cloud-Based Database of Concrete Deformation. 2019 Japan-Taiwan Workshop on Structural and Bridge Engineering, Kyoto, Japan.
6. Wen-Cheng Liao, Wei-Ru Su and Kai-Yueh Chang (2019, Apr). Elimination of Transverse Reinforcement in NEW RC Beam-Column Joints by using Highly Flowable Strain Hardening Fiber Reinforced Concrete (HF-SHFRC). the 8th Civil Engineering Conference in the Asian Region (CECAR 8), Tokyo, Japan.
7. Wen-Cheng Liao (2019, Mar). Experimental Study and Design Recommendations of Beam-Column Joints with High Strength Materials and Highly Flowable Strain Hardening Fiber Reinforced Concrete. 2019 ACI Spring Convention, Quebec, Canada.
8. Chia-Chun Guo, Wei-Cheng Chen and Wen-Cheng Liao (2018, Nov). Ultimate Shear Strength of High Strength Steel Fiber Reinforced Concrete Deep Beams. The 31st KKHTCNN Symposium on Civil Engineering, Kyoto, Japan.

9. Da-Zhan Huang, Kuang-Chieh Lin and Wen-Cheng Liao (2018, Nov). Corrosion Current Measurement under Different Corrosion Types of Steel Bars. The 31st KKHTCNN Symposium on Civil Engineering, Kyoto, Japan.
10. Wei-Hsiu Hu, Wei-Sheng Lin and Wen-Cheng Liao (2018, Nov). Influences of Reduced Elastic Modulus in Taiwan on the Collapse Evaluation of Structures. The 31st KKHTCNN Symposium on Civil Engineering, Kyoto, Japan.
11. Wen-Cheng Liao, Li-Wei Tseng, and Wei-Ru Su (2018, Nov). Development and Application of Highly Flowable Strain Hardening Fiber Reinforced Concrete in New RC Building Systems. The 20th Taiwan-Korea-Japan Joint Seminar on Earthquake Engineering for Building Structures (SEEBUS 2018), Kyoto, Japan.
12. You-Man Lin, Wei-Hsiu Hu and Wen-Cheng Liao (2018, Nov). Study of Influences of Reduced Elastic Modulus on Design Specifications for Concrete Structures in Taiwan. The 31st KKHTCNN Symposium on Civil Engineering, Kyoto, Japan.
13. Wen-Cheng Liao (2018, Oct). Establishment of Analysis System and Fast-Access Cloud-Based Database of Concrete Deformations. JCI and TCI Joint Workshop, Tokyo, Japan. 本
14. Wen-Cheng Liao (2018, May). Development and Application of Highly-Flowable Strain Hardening Fiber Reinforced Concrete in New RC Building Systems. 2018 Workshop with NCREC and Kyushu University, Taipei, Taiwan.
15. Wen-Cheng Liao (2018, Apr). Experimental Study of the First Precast and Prestressed UHPFRC Segmental Box-Girder Bridge in Taiwan. The 11th Taiwan-Japan Workshop on Structural and Bridge Engineering, Taipei, Taiwan.
16. Wen-Cheng Liao, Wei-Ru Su, and Kai-Yueh Chang (2018, Apr). Experimental Study of NEW RC Exterior Beam-Column Joint made of Highly-Flowable Strain Hardening Fiber Reinforced Concrete. STRUCTURES CONGRESS, ASCE SEI 2018, Fort Worth, TX, USA.
17. Kai-Yueh Chang, Wen-Cheng Liao, Wei-Cheng Chen (2017, Nov). Shear Strength and Cyclic Behavior of High Strength Steel Fiber Reinforcement Concrete Exterior Beam-Column Joints. The Thirtieth KKHTCNN Symposium on Civil Engineering, Taipei, Taiwan.
18. Tzu-Yu Hsu, Wen-Cheng Liao, Da-Zhan Huang (2017, Nov). Experimental Design for Mechanical Behavior of Deteriorated SFRC Beam with Working Stress Cracks by Accelerated Salt Spray Test. The Thirtieth KKHTCNN Symposium on Civil Engineering, Taipei, Taiwan.
19. Yi-Ting He, Wen-Cheng Liao, Wei-Hsiu Hu (2017, Nov). Analysis of Surface Crack Characteristics and Compressive Behavior of Concrete under Uniaxial Compression. The Thirtieth KKHTCNN Symposium on Civil Engineering, Taipei, Taiwan.
20. Wen-Cheng Liao, Wei-Ru Su (2017, Oct). Development and Application of Highly-Flowable Strain Hardening Fiber Reinforced Concrete in New RC Building Systems. The 15th East Asia-Pacific Conference on Structural Engineering and Construction, EASEC-15, Xian.
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22. Wen-Cheng Liao (2017, Mar). Implementation of Highly Flowable Strain Hardening Fiber Reinforced Concrete in New RC Precast Infrastructure System. 2017 Japan-Taiwan Workshop on

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25. 李宇翔, 黃淳憶, 廖文正 (2021 年 11 月)。高強度鋼纖維混凝土開口剪力牆行為研究與設計流程。台灣混凝土學會 2021 年混凝土工程研討會, 高雄, 台灣。
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40. 廖文正, 王又德, 蘇韋如, 張凱越 (2017 年 12 月)。以高流動性應變硬化鋼纖維混凝土取代 New RC 梁柱接頭箍筋之設計及驗證。台灣高強度鋼筋混凝土(Taiwan New RC)結構施工技術與構件耐震性能研討會，台北，台灣。
41. 何宜庭, 廖文正, 胡瑋秀 (2017 年 11 月)。混凝土於單軸壓下表面裂縫特徵與軸壓行為分析研究。台灣混凝土學會 2017 年會暨混凝土工程研討會，嘉義，台灣。
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專書(Monographs)

1. Chien-Kuo Chiu, Chung-Chan Hung, Hung-Jen Lee, Kai-Ning Chi, Ker-Chun Lin, Kuang-Yen, Liu, Min-Lang Lin, Min-Yuan Cheng, Sheng-Jhih Jhuang, Shyh-Jiann Hwang, Wen-Cheng Liao, Wen-Cheng Shen, Yi-An Li, Yu-Chen Ou and Yung-Chih Wang. *Design Guideline for Building of High-Strength Reinforced Concrete Structures*. . Taipei, Taiwan. Dec, 2018. MOST 105-2625-M-002-004.
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