



Recent Activity of Taiwan Concrete Institute

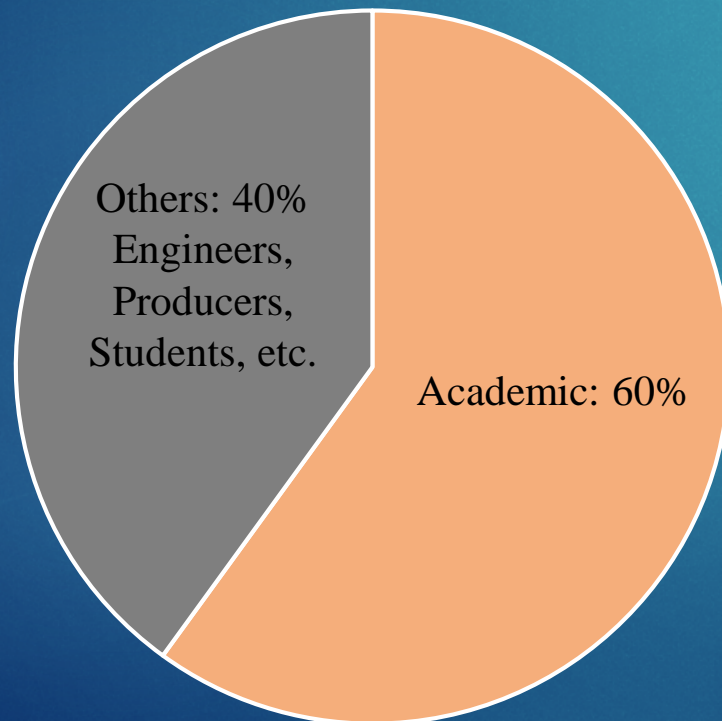


MIN-YUAN CHENG

NATIONAL TAIWAN UNIVERSITY OF SCIENCE AND
TECHNOLOGY

Taiwan Concrete Institute

- Age: Established in 2006
- Member: 423 (before Jan. 2018)
- Member Affiliation:



Tasks:

1. Promote research and development of concrete technology.
2. Assist government to develop building and construction codes.
3. Collaborate with international allies.



Recent Activity

1. Evaluation and retrofit of public schools.
2. Translation of ACI 318-14 and update Taiwanese Building Code
3. Research on high-strength RC components

Recent Activity

- Evaluation and retrofit of public schools.
 - principal investigator: Researchers at NCREE
 - sponsored by Ministry of Education due to ChiChi Earthquake

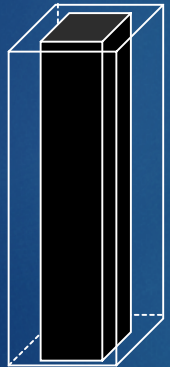


M = 7.3; 01:47 am, Sep. 21, 1999

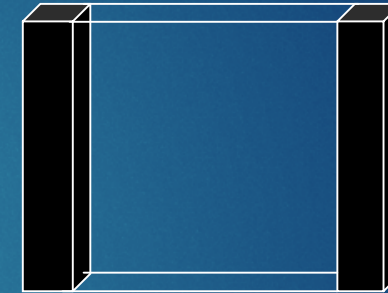


Recent Activity

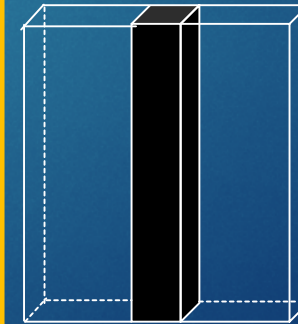
- Evaluation and retrofit of public schools.
— common retrofitting techniques



Jacketed
column



Shear wall



Wing wall



Recent Activity

- Evaluation and retrofit of public schools.
 - by the end of 2017:
 - More than 25,000 schools have been investigated (92%)
 - About 25% schools were retrofitted and rebuilt.



Tainan Earthquake M = 6.6 (Feb. 6th, 2016)



Wei-Guan⁽¹⁾



King's Bank⁽²⁾



No visible crack

(1) http://hk.on.cc/tw/bkn/cnt/news/20180208/bkntw-20180208205329093-0208_04011_001.html

(2) http://www.xinhuanet.com/photo/2016-02/06/c_128708852.htm

Recent Activity

- Code translation and updates



Completed in 2016



Taiwanese Building Code (2011)

Recent Activity

- Research on high-strength RC components



Beams



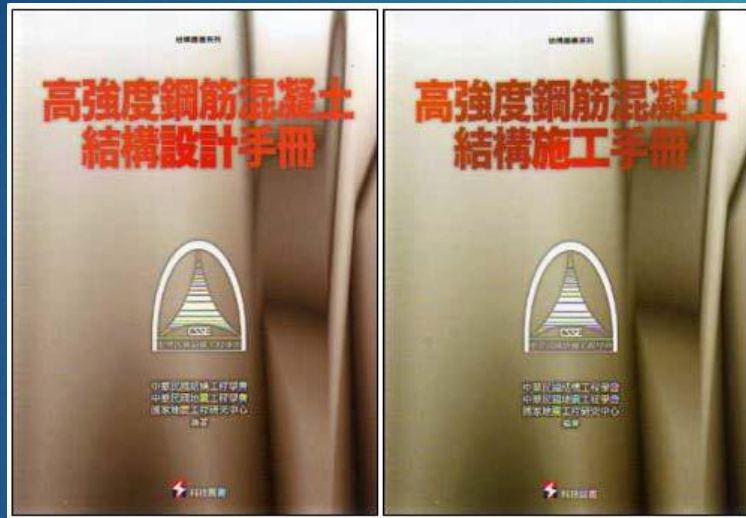
Columns



Walls

Recent Activity

- Research on high-strength RC components



Chinese version
Completed in 2017



English version
Expected to be completed in 2018

Recent Activity

- Research on high-strength RC components

Presentation in ACI 2019 spring convention, Quebec, Canada

"Recent Advances in Construction, Evaluation and Repair of Concrete Structures and Materials: International Perspectives with KCI and TCI"

Supported by ACI 345, 369, KCI and TCI

TCI Presentation: 6

- ▶ Seismic Evaluation and Retrofitting of Low-rise Reinforced Concrete Buildings in Taiwan
- ▶ Taiwan New RC project and guidelines
- ▶ Confined Concrete Model and Design of High-Strength Reinforced Concrete Columns
- ▶ Seismic Design and Serviceability Requirement for RC Beams with High Strength Steel Reinforcement
- ▶ Experimental Study and Design Recommendations of Beam-Column Joints with High Strength Reinforcement and Highly Flowable Strain Hardening Fiber Reinforced Concrete
- ▶ Cyclic Behavior of Concrete Structural Walls Reinforced with High-Strength Rebar

Taiwan Concrete Institute



Thank you for your attention



<http://gallery.dcvview.com/showGallery.php?id=143524>