

## Publications & Presentations, Dr. Shih-Ho Chao

### Journal Papers:

1. Parra-Montesinos, G. J., Peterfreund, S. W., and Chao, S.-H. (2005), "Highly Damage Tolerant Beam-Column Joints Through the Use of High-Performance Fiber Reinforced Cement Composites," ACI Structural Journal, V. 102, No. 3, May-June, 2005, pp. 487-495.
2. Chao, S.-H., Naaman, A. E., and Parra-Montesinos, G. J. (2006), "Bond Behavior of Strands Embedded in Fiber Reinforced Cementitious Composites," PCI Journal, Precast/Prestressed Concrete Institute, Vol. 51, No. 6, November-December 2006, pp. 56-71.
3. Chao, S.-H., Khandelwal, K., and El-Tawil, S. (2006), "Ductile Web Fracture Initiation in Steel Shear Links," ASCE Journal of Structural Engineering, Vol. 132, No. 8, August, 2006, pp. 1192-1200.
4. Chao, S.-H., and Goel, S. C. (2006), "Performance-Based Design of Eccentrically Braced Frames Using Target Drift and Yield Mechanism," AISC Engineering Journal, American Institute of Steel Construction, Third Quarter, 2006, PP. 173-200.
5. Chao, S.-H., and Naaman, A. E. (2006), "Simplified Calculation of Short-Term Deflection in Prestressed Two-Way Flat Slabs," ACI Structural Journal, V. 103, No. 6, November-December, 2006, pp. 850-856.
6. Chao, S.-H., Goel, S. C., and Lee, S.-S. (2007), "A Seismic Design Lateral Force Distribution Based on Inelastic State of Structures," Earthquake Spectra, Earthquake Engineering Research Institute, (*will appear in August 2007 issue*).
7. Chao, S.-H., and Goel, S. C. (2007), "Performance-Based Plastic Design of Special Truss Moment Frames," AISC Engineering Journal, American Institute of Steel Construction, (*Accepted for Publication*).
8. Chao, S.-H., and Goel, S. C. (2007), "A Modification Equation for Expected Maximum Shear Strength of The Special Segment for Design of Special Truss Moment Frames," AISC Engineering Journal, American Institute of Steel Construction, (*Accepted for Publication*).
9. Goel, S. C., Leelataviwat, S., Lee, S.-S., and Chao, S.-H. (2007), "Underlying Theory Behind Performance-Based Plastic Design (PBPD) Method for Earthquake-Resistant Structures," submitted to Earthquake Spectra (*under review*).

### Conference Proceedings:

1. Lee, S. S., Goel, S. C., and Chao, S.-H. (2004), "Performance-Based Design of Steel Moment Frames Using Target Drift and Yield Mechanism," Proceedings, 13th World Conference on Earthquake Engineering, Paper No. 266, Vancouver, B. C., Canada.
2. Chao, S.-H., Goel, S. C., and Lee, S. S. (2006), "A Seismic Design Lateral Force Distribution Based on Inelastic Response," Proceedings, Eighth U.S. National Conference on Earthquake Engineering, San Francisco, California.

3. Chao, S.-H. and Goel, S. C. (2006), "A Seismic Design Method for Steel Concentric Braced Frames for Enhanced Performance," Proceedings, Fourth International Conference on Earthquake Engineering, Taipei, Taiwan.
4. Chao, S.-H. and Goel, S. C. (2006), "Performance-Based Seismic Design of Special Truss Moment Frames," Proceedings, Fourth International Conference on Earthquake Engineering, Taipei, Taiwan.
5. Chao, S.-H., Liao, W.-C., Wongtanakitcharoen, T., and Naaman, A. E. (2007), "Large Scale Tensile Tests of High Performance Fiber Reinforced Cement Composites," High Performance Fiber Reinforced Cement Composites: HPFRCC-5, International Workshop, Mainz, Germany, July 10-13, 2007.
6. Liao, W.-C., Chao, S.-H., Park, S.-Y., and Naaman, A. E. (2007), "Self-Consolidating High Performance Fiber Reinforced Concrete: SCHPFRC," High Performance Fiber Reinforced Cement Composites: HPFRCC-5, International Workshop, Mainz, Germany, July 10-13, 2007.

Other:

1. Goel, S. C. and Chao, S.-H. (2006), "A Performance-Based Plastic Design (PBPD) Method for Seismic-Resistant Structures," Summary paper for Technical Subcommittee 2 (Design Criteria and Analysis), Building Seismic Safety Council (BSSC).

Technical Report:

1. Chao S.-H. (2003), "Innovative Hybrid Reinforced Concrete-Special Segment Frame for High Seismic Zone," Independent Study Report.
2. Chao, S.-H., and Goel, S. C. (2005), "Performance-Based Seismic Design of Eccentrically Braced Frames Using Target Drift and Yield Mechanism as Performance Criteria," Report No. UMCEE 05-05 & AISC Publication, 149 pp.
3. Chao, S.-H., and Goel, S. C. (2006), "Performance-Based Plastic Design of Seismic Resistant Special Truss Moment Frames," Report No. UMCEE 06-03, 225 pp.
4. Chao, S.-H. (2005), "Bond Characterization of Reinforcing Bars and Prestressing Strands in High Performance Fiber Reinforced Cementitious Composites (HPFRCC) Under Monotonic and Cyclic Loading," Doctorial Dissertation, 475 pp.
5. Liao, W.-C., Chao, S.-H., Park, S.-Y., and Naaman, A. E. (2006), "Self-Consolidating High Performance Fiber Reinforced Concrete: SCHPFRC--Preliminary Investigation," Report No. UMCEE 06-02, 76 pp.

Presentation:

1. "Some Emerging Research on Earthquake and Structural Engineering in the U.S.," Presentation at National Center for Research on Earthquake Engineering (NCREE),

Taiwan, October 26th, 2005.

2. "A Seismic Design Lateral Force Distribution Based on Inelastic Response," Presentation at the Eighth U.S. National Conference on Earthquake Engineering, San Francisco, California, April 19th, 2006.
3. "A Seismic Design Method for Steel Concentric Braced Frames for Enhanced Performance," Presentation at Fourth International Conference on Earthquake Engineering, Taipei, Taiwan, October 12th, 2006.
4. "Performance-Based Seismic Design of Special Truss Moment Frames," Presentation at Fourth International Conference on Earthquake Engineering, Taipei, Taiwan, October 12th, 2006.
5. "Bond Performance of Reinforcing Steel in High-Performance Fiber Reinforced Concrete under Monotonic and Cyclic Loading," Presentation at ACI Committee 408 (Bond and Development of Reinforcement) meeting, ACI Convention, Denver, November 5th, 2006.
6. "Large Scale Tensile Tests of High Performance Fiber Reinforced Cement Composites," High Performance Fiber Reinforced Cement Composites: HPFRCC-5, International Workshop, Mainz, Germany, July 11, 2007