

Chin-Hsiung Loh (羅俊雄)

Department of Civil Engineering National Taiwan University

No.1, Section 4, Roosevelt Road, Taipei 10617, Taiwan

Tel: +886-2-3366-4248, Fax: +886-2-27396752,

e-mail: loh0220@ccms.ntu.edu.tw



Professional Preparation:

National Chun-Hsin University Civil Engineering B.S. 1970

National Taiwan University Civil Engineering M.S. 1974

National Taiwan University Civil Engineering Ph.D. 1980

Appointments:

10/96-present Distinguished Professor, National Taiwan University

08/89-present Professor, Department of Civil Engineering, NTU, Taiwan

08/10-Present Joint Appointment Professor, Department of Geology, NTU, Taiwan.

01/10-present Research Fellow (Part time), Institute of Earth Science, Academia Sinica, Taiwan

10/10-Present Senior Consultant, National Center for Research for Earthquake Eng., NARL,
Taiwan

01/11-12/12 Committee member, Disaster Mitigation Committee, Executive Yuan, Taiwan.

02/10-06/10 Visiting Professor, University of California, Davis, USA

02/08-05/08 Visiting Professor, University of Michigan, Ann Arbor, USA

08/04-12/04 Visiting Professor, Stanford University, USA

07/03-07/04 Director, National Science & Technology Center for Disaster Mitigation, Taiwan

01/02-07/04 Coordinator, National Hazard Mitigation Program, National Science Council, Taiwan

10/97-10/03 Director, National Center for Research on Earthquake Engineering, Taiwan

08/90-07/93 Director, Center for Research on Earthquake Engineering, College of Engineering,
National Taiwan University, Taiwan

08/88-07/89 Professor, National Central University, Taiwan

02/83-07/88 Associate Professor, National Central University, Taiwan

08/87-02/88 Visiting Scholar, California Institute of Technology, USA

07/83-12/83 Research Associate, University of Illinois at Urbana-Champaign, USA

09/82-06/83 Research Associate, University of California, Berkeley, USA

Awards and Honors

Fellow, Chinese Society of Structural Engineering, 2010

Fellow, Chinese Taiwan Society of Earthquake Engineering, 2010

Achievement Award, The Taiwan Society of Earthquake Engineering, 2009

Distinguished Professor, National Taiwan University, 2006

Achievement Awards in Natural Hazard Mitigation (3rd Place), Executive Yuan,
Taiwan Government, 2005

Special Program Research Award, National Science Council, 2000~2003

Research Award, International Association for Structural Safety and Reliability, 2001

Special Program Research Award, National Science Council, 1997~2000

Outstanding Research Award, National Science Council, 1995-1997

Outstanding Research Award, National Science Council, 1993-1995

Outstanding Research Award, National Science Council, 1991-1993

Outstanding Research Award, National Science Council, 1987-1989

Academic Services

Board of Editors of:

Structural Control & Health Monitoring,

Earthquake Engineering & Structural Dynamics,

Structure & Infrastructure Engineering

Courses Offered in National Taiwan University

Earthquake Engineering,

Concept of Seismic Analysis of Structures,

Structural Safety and Reliability,

Random Vibration,

Stability of Structures,

Spectral analysis & Signal Processing,

Special Topics on Earthquake Engineering

Smart Structural Systems

Recent Synergistic Activities:

Co-Chair of NSF-NSC International Workshop on Bio-inspired Sensing and Bio-inspired Actuation Technology, April, 2009 (collaborate with Prof. B. Spencer, Prof. J. P. Lynch and Dr. S. C. Liu)

Co-Chair of NSF-NSC International Workshop on Mega-City / Mega-Disaster Hazard Mitigation, May, 2010 (collaborate with Prof. B. Spencer, Prof. J. P. Lynch and Dr. S. C. Liu)

Research Interests:

- Structural Health Monitoring and Structural Control (On-line system identification and damage detection of civil infrastructure, Semi-active control, Decentralize control)
- Strong Ground Motion Characteristics and Performance-based Design of Structure
- Earthquake Hazard Analysis

Research Projects (2009~ 2012)

- NSC 101-2625-M-002 -015 (from 2012/8 ~ 2013/7)

“Advanced Sensing, Degradation Detection, Diagnostic Capabilities for Damage Monitoring of Bridges-- Statistical Novelty Analysis of Bridge Structure under Environmental and Operational Vibrations,”

- NTU Excellence Research Project 101R8917 (2011/7/1~1012/12/31)

“Sensing and diagnostic of impending structural failure using both time domain and frequency domain analysis of vibration signals,”

- CWB- MOTC-CWB-101-E-06 (from 2012/01~2012/12)

“Integration of sensing, system identification and health monitoring technologies for damage prognosis of bridges (II),”

- NSC 99-2221-E-002-088-MY3 (from 2010/8 ~ 2013/7)

“Nonlinear Feature Extraction and Damage Identification of Structural System through the Adoption of Advanced Data-Processing, Sensing and Actuation Technologies”.

- CWB- MOTC-CWB-100-E-06 (from 2011/01~2011/12)

“Integration of sensing, system identification and health monitoring technologies for damage prognosis of bridges (I),”

- NSC 98-2625-M-002-018-MY3 (from 2009/8~2012/7)

“Integration of river basin civil infrastructural system for hazard mitigation and early bridge warning system,.

- CWB-99B54005 (from 2010/01~2010/12)

“Application of smart sensing system for bridge monitoring and damage detection (IV),”

- NSC 99-2221-E-002 -088 -MY3 (from 2010/8~2013/7)

“Design and integration of sensing, structural health monitoring and actuation for engineering structure,”.

- NSC 96-2221-E-002-121-MY3 (from 2006/8~2009/7)

“Application of smart sensing system for bridge monitoring and damage detection (III),”

Collaborators and Co-Editors (in the past 4 years):

J. P. Lynch (Univ. of Michigan), K. H. Law (Stanford University), A. Kiremidjian (Stanford University),

J. N. Yang (Univ. of California, Irvine), P. N. Roschke (Texas A&M Univ.), A. K. Agrawal (City college of NY),

M. L. Wang (Northeastern Univ.), B. F. Spencer (UIUC).

JOURNAL Publications (*: Corresponding author)

- C.-H. Loh*, K. J. Loh, Y.-S. Yang W.-Y. Hsiung and Y.-T. Huang, “Vibration-based System Identification and Damage Detection of Wind Turbine Blades,” Submit to. *J. of Structural Control & Health Monitoring* (2014-9)

- Chin-Hsiung Loh*, Yu-Ting Huang, Wan-Ying Hsiung, Yuan-Sen Yang, Kenneth J. Loh, “Vibration-Based Identification of Rotating Blades Using Rodrigues’ Rotation Formula from A 3-D Measurement,” submit to *Smart Structures and Systems*,, 2014

1. Yang, J. N., Xia, Y. and **Loh, C. H.** “Damage identification of bolt joint connections in steel frame,” *Journal of Structural Engineering, ASCE*, Vol. 140, No.3, pp. 04013064-1 to 04013064-9 (March, 2014).

2. Yang, J. N., Xia, Y., and **Loh, C. H.** “Damage detection of hysteretic structures with pinching effect,” *Journal of Engineering Mechanics, ASCE*, Vol. 140, No. 3, pp. 462-472 (2014).

3. **Chin-Hsiung Loh***, Shu-Hsien Chao, Jian-Huang Weng, Tzu-Hsiu Wu, “Application of Subspace Identification Technique to Long-Term Seismic Response Monitoring of Structure,” *Earthquake Engineering & Structural Dynamics*, 2014 (in printing)

4. Jiann-Shiun Lew and **Chin-Hsiung Loh**, “Structural health monitoring of an arch dam from static

Deformation,” *Journal of civil Structural Health Monitoring*, July 2014, DOI 10.1007/s13349-014-0084-5

5. Wen-Yi Chang, Jihn-Sung Lai, Teng-Yi Yu, Franco Lin, Lung-Cheng Lee, Whey-Fone Tsai, **Chin-Hsiung Loh**, "Pier scour monitoring system by bed-level image tracking," *International Journal of Sediment Research*, 29 (2014) 269-277
6. Chao, S.H., **Loh, C. H.***, "Vibration-based damage identification of reinforced concrete member using optical sensor array data," *J. of Structural Health Monitoring*, Vol.12, No. 5-6, 397-410. 2014.
7. Chao, S.H., **Loh, C.H.***, Tseng, M.H., "Structural Damage Assessment Using Output-Only Measurement: Localization and Quantification," *Int. Journal of Intelligent Material Systems and Structures*, Vol. 25(9) 1097–1106, 2014.
8. Wen Yi chang; George Constantinescu; Ho Cheng Lien; Whey Fone Tsai; Jihn Sung Lai; **Chin Hsiung Loh**, "Flow structure around bridge piers of varying geometrical complexity," *J. Hydraulic Engineering*, ASCE, 139(8), 812–826. 2013.
9. Chao, S. H. and **Loh, C. H.***, "Application of Singular Spectrum Analysis to Structural Monitoring and Damage Diagnosis of Bridges," *J. of Structures and Infrastructural Systems*, Vol.10, No.6, 708-727, 2014 (IF=2.47)
10. **Loh, C.H.*** and Liu, Y.C., "Application of recursive SSA as data pre-processing filter for stochastic subspace identification," *Smart Structures and Systems*, Vol.11, No.1, 19-34, 2013 (IF=1.276)
11. **Loh, C. H.***, Li, J. H. and Chao, S. H., "Application of Singular Spectrum Analysis to Identify the Degrading Structure Using Deteriorate Distributed Element Model," *Earthquake engineering & Structural dynamics*, Vol.42, 743-761, 2013 (IF=2.168) 15/122
12. Liu, Y. C., **Loh, C. H.*** and Ni, Y. Q., "Stochastic Subspace Identification for Output-only Modal Analysis: Application to Super High-rise Tower under Abnormal Loading Condition," *Earthquake engineering & Structural dynamics*, Vol. 42, 477-498. 2013. (IF=2.168) 15/122
13. **Loh, C.H.***, Weng, J.H., Chen, C.H. and Lu, K.C., "System Identification of Mid-story Isolation Building Using Both Ambient & Earthquake Response Data," *Structural Control & Health Monitoring*, Vol.20, 139-155. 2013. (IF=1.559) 21/122
14. **Loh, C. H.*** and Chen, M. C. "Modeling of Environmental Effects for Vibration-based SHM Using Recursive Stochastic Subspace Identification Analysis," *Key Engineering Materials* (Trans Tech Pub, Switzerland), Vol.558, 52-64, 2013
15. Liao, W.I., Chai, J.F., **Loh, C.H.**, and Huang, S.H., "Seismic performance of raised floor system by shake-table excitation," *J. The Structural Design of Tall and Special Building*, Vol.22, Issue 10, 770-782, (2013).
16. Kao, C. Y. and **Loh, C. H.**, "Monitoring of Long-Term Static Deformation Data of Fei-Tsui Arch Dam Using Artificial Neural Network-Based Approaches," *Structural Control & Health Monitoring*, Vol.20, Issue 3, 282-303-2013
17. **Loh, C. H.***, Liu, Y. C. and Ni, Y. Q., "SSA-based stochastic subspace identification of structures from output-only vibration measurements," *Smart Structures and Systems*, Vol.10, No.4-5, 331-351, 2012
18. Hsu, T. Y. and **Loh, C. H.**, "A Frequency Response Function Change Method for Damage Localization and Quantification of A Shear Building Under Ground Excitation," *Earthquake engineering & Structural dynamics*, Volume 42, Issue 5, pages 653–668, 25 April 2013.
19. Chang, W.I., Franco Li, J.S. Lai, L.C. Lee, W.F. Tsai, **C.H. Loh**, "Multi-Lens pier scouring monitoring

- and scour depth prediction,” Proceeding of the Institution of Civil Engineers, [Volume 167, Issue 2](#), December, pages 88 –104, 2012.
20. **Loh, C. H.***, C. H. Chen and T. Y. Hsu, “Application of advanced statistical methods for extracting long-term trends in static monitoring data from an arch dam,” *J. Structural Health Monitoring*, Vol. 10, Issue 6, November 2011, 587 – 601
 21. Liao, W.I., J.X. Wang, G. Song, H. Gu, and C. Olmi, Y. L. Mo, K.C. Chang and **C.H. Loh**, “Structural Health Monitoring of Concrete Columns Subjected to Seismic Excitations Using Piezoceramic-based Sensors,” Accept for publication in *Smart Materials and Structures*, Vol.20, 125015, 2011. Published 28 November 2011
 22. **Loh, C. H.***, C. H. Mao, J. R. Huang and T. C. Pan, “System Identification of Degrading Hysteresis of Reinforced Concrete Frames,” *Earthquake Engineering and Structural Dynamics*, 2011. 40: 623–640. (Top cited article in EESD-2011)
 23. **Loh, C. H.***, J.-H. Weng, Yi-Cheng Liu, Pei-Yang Lin and Shieh-Kung Huang, “Structural Damage Diagnosis Based on On-line Recursive Stochastic Subspace Identification,” *J. Smart Materials and Structures*, Vol. 20, No. 5, May 2011.
 24. Weng, J.H. and **Loh, C. H.***, “Recursive Subspace Identification for Online Tracking of Structural Modal Parameter,” *Mechanical Systems and Signal Processing*, 25 (2011) 2923–2937.
 25. Hsu, T.Y., Huang, S.K., Lu, K.C., **Loh, C.H.**, Wang, Y., Lynch, J.P., “On-line structural damage localization and quantification using wireless sensors,” *Smart Materials and Structures*, 20 (2011), 105025 (11pp).
 26. **Loh, C. H.***, Mao, C. H., Chao, S. H. and Weng, J.H., “Feature Extraction and System Identification of Reinforced Concrete Structures Considering Degrading Hysteresis,” *J. of Structural Control & Health Monitoring*, Volume 17, Issue 7, Pages 709–847, 2011
 27. Ting-Yu Hsu and **Loh, C. H.*** “Damage Detection Accommodating Nonlinear Environmental Effects by Nonlinear Principal Component Analysis,” *Structural Control & Health Monitoring*, 17, 2010, 338-354.
 28. O E Ozbulut, P N Roschke, P Y Lin and **C H Loh**, “GA-based optimum design of a shape memory alloy device for seismic response mitigation,” *Smart Materials & Structures*. Vol.19, No.6 (2010) 065004.
 29. J-H. Weng, **C.H. Loh*** and J.N. Yang, “Experimental Study of Damage Detection by Data-Driven Subspace Identification and Finite Element Model Updating,” *J. of Structural Engineering*, ASCE, 2009 (in printing [STENG-225] 006912QST) 135(12) Dec. 2009 1533-1544
 30. Chao, Shu-Hsien and **Loh, Chin-Hsiung.***, “Develop Biaxial Hysteretic Model for Reinforced Concrete Structures,” *Int. J. of Nonlinear Mechanics*, 44, 2009, 745-756.
 31. Ai-Lun Wu, **C. H. Loh*** and J. N. Yang, “Input Force Identification: Application to Soil-Pile Interaction,” *J. Structural Control & Health Monitoring*, 16, 223-240, 2009
 32. Chiun-Lin Wu, Wu-Wei Kuo, Yuan-Sen Yang, Shyh-Jiann Hwang, Kenneth J. Elwood, Chin-Hsiung. Loh, Jack P. Moehle, “Collapse of a nonductile concrete frame: Shaking table tests,” *Earthquake Engineering & Structural Dynamics*, 38, 2009, 205-224.
 33. Y.-C. Fan, **C. H. Loh***, J. N. Yang and P.-Y. Lin, “Experimental performance evaluation of an equipment isolation using MR-Dampers,” *Earthquake Eng. & Structural Dynamics*, 38, 285-305, 2009.
 34. David A. Shook, Paul N. Roschke, Pei-Yang Lin, **Chin-Hsiung Loh**, “Semi-active control of a torsional

- responsive structure,” *Engineering Structures*, 29, 2009, 57-68.
35. Hae Young Noh, K. Krishnan Nair, Anne S. Kiremidjian and **Chin-Hsiung Loh**, “Application of time series based damage detection algorithms to the benchmark experiment at the National Center for Research on Earthquake Engineering (NCREE) in Taipei, Taiwan,” *Smart Structures and Systems*, Vol. 5, No. 1 (2009) 95-117
36. K. C. Lu, **Loh, C.-H.***, J. N. Yang, P. Y. Lin, “Decentralized Sliding Mode Control of Building Using MR- Dampers,” *Smart Material and Structures*, 17 (5) 2008 (Online publication stacks. iop/SMS/17/00000.)
37. Weng, J.H., **Loh, C.H.***, Lynch, J.P., Lu, K.C., Linn, P.Y., Wang, Y., “Output-Only Modal Identification of a Cable-Stayed Bridge Using Wireless Monitoring Systems,” *J. of Engineering Structure*, 30 (2), 2008, 1802-1830.
38. Davis Shook, P. Roschke, P. Y. Lin and **Chin-Hsiung Loh**, “GA-Optimized fussy logic control of large-scale building for seismic loads,” *J. of Engineering Structures*, Volume: 30, Issue: 2, Pages: 436-449, 2008.
39. K. C. Lu, **C. H. Loh***, Y. S. Yang, J. P. Lynch, K. HJ. Law, “Real-time structural damage detection using wireless sensing and monitoring system,” *Smart Structures and Systems*, Vol. 4, No. 6, 2008, 759-778.
40. Ching-Yun Kao and **Chin-Hsiung Loh**, “NARX Neural Networks for nonlinear analysis of structures in Frequency domain,” *Journal of Chinese Institute of Engineers*, 31(5), 791-804, 2008
41. **C.-H. Loh*** and C.-M. Chang, “Application of Centralized and Decentralized Control to Building Structure: Analytical Study,” *ASCE, J. of Engineering Mechanics*, 2008, 134(11). 970~982.
42. T.-Y. Hsu and **Loh, C. H.***, “Damage Diagnosis of Frame Structures Using Modified Modal Strain Energy Change Method,” *ASCE, J. of Structural Engineering*, 2008, 134(11), 1000~1012.
43. J.P Lynch, Y. Wang, R.A. Swartz, K.C. Lu and **C.H. Loh**, “Implementation of a close-loop structural control system using wireless sensor networks,” *Structural Control & Health Monitoring*, 15(4), June 2008, 518-539.
44. **Loh, C. H.***, Lynch, J.P., et al. “Experimental Verification of Wireless Sensing and Control System for Structural Control Using MR-Dampers,” *Earthquake Engineering & Structural Dynamics*, Vol.36, No.10, August 2007, 1303-1328.
45. Chao, S. H. and **Loh, C. H.**, “Inelastic Response Analysis of RC Structure Using Modified Force Analogy Method,” *Earthquake Engineering & Structural Dynamics*, Vol.36, No.12, October, 2007, 1659-1684
46. Y. Wang, R. A. Swartz, J. P. Lynch, K. H. Law, K. C. Lu, **C. H. Loh**, “Decentralized civil structural control using real-time wireless sensing and embedded computing,” *Smart Structures and Systems*, 3(3), 2007, 321-340.
47. P. Y. Lin, P. N. Roschke, **C. H. Loh**, ”Hybrid base-isolation with magnetorheological damper and fuzzy control”, *Structural Control and Health Monitoring* Vol. 14, Issue 3, April 2007, Pages: 384-405.
48. S. M. Chen and **C. H. Loh**, “Estimation of permanent ground defoemation from Near Fault ground motion accelrogram,” *Bulletin Seismology Society of America.*, Vol. 97, No. 1B, Jan-Feb., 63-75, 2007
49. V. Y. Sokolov, **C. H. Loh**, and W. Y. Chien, “Application of horizontal-to-vertical (H/V) Fourier spectra ratio for analysis of site effect on rock (NEHRB-Class B) sites in Taiwan,” *Soil Dynamics and*

Earthquake Engineering, Vol. 27, 2007, 314-323.

50. **Loh, C. H.*** and C. M. Chang, "Vibration control assessment of ASCE benchmark model of cable-stayed bridge," *J. of Structural Control & Health Monitoring*, Vol.13, No.4, July- August, 2006, 825-848.
51. C.M. Chang and **C. H. Loh***, "Seismic Response Control of Cable-Stayed Bridge Using Different Control Strategies," *J. Earthquake Engineering*, Vol.10, Issue 4, July 2006, 481-508.
52. Kim, H. S., P. N. Roschke, P. Y. Lin and **C. H. Loh**, "Neuro-fussy model of hybrid semi-active base isolation system with FPS bearing and an MR damper," *Engineering Structure*, Vol. 28, 947-958, 2006
53. Chin-Lien Yen, **C. H. Loh**, Liang-Chun Chen, Liang-Yung Wei, Wen-Cheng Lee, and Hsin-Ya Ho, "Development and Implementation of Disaster Reduction Technology in Taiwan," *Natural Hazards (Int. Journal)*, 37: 3-21, Jan. 2006.
54. Chin-Hsun Yeh, **C. H. Loh***, and Keh-Chyuan Tsai, "Overview of Taiwan Earthquake Loss Estimation System," *Natural Hazards (Int. Journal)*, 37: 23-37, Jan. 2006. 15.
55. Wen-Yu Jean, Yu-Wen Chang, Kuo-Liang Wen, and **Chin-Hsiung Loh**, "Early Estimation of Seismic Hazard for Strong Earthquakes in Taiwan," *Natural Hazards (Int. Journal)*, 37: 39- 53, Jan. 2006.
56. Wen-I Liao, **C. H. Loh**, and Keh-Chyuan Tsai, "Study on the Fragility of Building Structures in Taiwan," *Natural Hazard (Int. Journal)*, 37:55-69, Jan. 2006.
57. Wen, T.H. and **Loh, C. H.***, "Evaluation of the Residual Capacity of Structure in PBSO Through Seismic Hazard Analysis," *J. of Structures and Infrastructure Engineering*, 2(1), 1-11, 2006
58. Wen, T.H. and **Loh, C.H.***, "Establish the Relationship between Damage Measure, Seismic Hazard, Structural Ductility and Period for PBSO," *Journal of the Chinese Institute of Engineers*, Vol.28, 2005
59. Pavlenko, O. and **Loh, C. H.**, "Nonlinear identification of soil response at Dahan downhole array site during the 1999 chi-Chi earthquake," *J. of Soil Dynamics and Earthquake Engineering*, Vol.25, 241-250, 2005.
60. P. Y. Lin, L. L. Chung, **C. H. Loh**, "Semi-active Controlled Building Structure with STMD," *J. of Computer- Aided civil and Infrastructure Engineering*, 20, 30-46, 2005.
61. Liao, Wen-I, **C. H. Loh** and B. H. Lee, "Comparison of dynamic response of isolated and non-isolated continuous girder bridges subjected to near-fault ground motions," *Engineering Structures*, 26, 2004, 2173-2183.
62. Liao, Wen-I and **Chin-Hsiung Loh**, "Preliminary study on the fragility curves for highway bridges in Taiwan," *J. of the Chinese Institute of Engineers*, Vol.27, No.3, 2004, 367-375.
63. Liao, Wen-I, Imad Mualla, and **C. H. Loh**, "Shaking table test of a friction-damped frame structure," *J. of Structural Design of Tall Buildings*, 13, 2004, 45-54.
64. Chang, S. Y., Li, Y-F. and **Loh, C.-H.**, "Experimental study of seismic behavior of As-build and CFRP repaired reinforced concrete bridge columns," *J. of Bridge Engineering*, ASCE, July, 2004.
65. V. Sokolov, **C.-H. Loh** and K.-L. Wen, "Evaluation of Generalized Site Response Functions for Typical Soil Classes (B, C and D) in Taiwan" *Earthquake Spectra*, 20(4), 1279-1316, 2004
66. Olga Pavlenko and **C. H. Loh**, " Nonlinear System Identification of RCS structures: Using Pseudo-Dynamic Testing Data" ASCE, *J. of Engineering Mechanics*, July 2004.
67. Sokolov, V., Ovcharenko, **C. H. Loh** and K. L. Wen, "Seismic hazard assessment for the Taiwan region on the basis of recent strong-motion data and prognostic zonation of future earthquakes," *Journal of*

Natural Hazard, Vol. 33, 2004, 319~363.

68. Sokolov V. Yu, **C. H. Loh** and K. L. Wen, "Evaluation of hard rock spectral models for the Taiwan region on the basis of the 1999 Chi-Chi earthquake data", *Soil Dynamics and Earthquake Engineering*, 23 (8), 715-735, 2003.
69. **C. H. Loh***, K. C. Tsai, L. L. Chung and C. H. Yeh, „Lessons of the 31 March 2002 Earthquake in East Coast of Taiwan,“ *Earthquake Spectra*, Vol.19, No.3, August, 531-556, 2003.
70. Z. K. Lee, T. S. Wu and **C. H. Loh***, "System Identification on Seismic Behavior of an Isolated Bridge", *Earthquake Engineering and Structural Dynamics*, Vol.32(12), 1797-1812, 2003.
71. **C.H. Loh***, L.Y. Wu and P.Y. Lin, “Displacement control of isolated structures with semi-active control devices,” *J. of Structural Control*, Vol.10, 77-100, 2003.
72. **Loh, C. H.*** “Adaptation of New Technology in Earth Science and Civil Infrastructures for Earthquake Hazard Mitigation,” *J. of Earthquake Engineering and Engineering Seismology*, 2003.
73. 廖文義、羅俊雄、邱世濱, “位移設計法與位移設計反應譜分析,” *結構工程*, Vol.18, No.3, 59-75,(2003)
74. Chen, Ming-Hung, Kuo-Liang Wen and **Chin-Hsiung Loh**, “A study of shallow shear wave velocities for alluvium deposit in southwestern Taiwan, “ *J. of the Chinese Institute of Civil & Hydraulic Engineering*, Vol.15, No.4, 2003, 667-677 (in Chinese).
75. Cheung, S. T. and **C. H. Loh***, “Identification and Verification of Seismic Demand from Different Hysteretic Models,” *J. of Earthquake Engineering*, March, 331-355, (2002)
76. **C. H. Loh**, Chin-Hsung Yeh, Liang-Chun Chen, Hung-Chih Hung , Wen-Yu Jean and Wen-I Liao, “Damage Assessment System HAZ-Taiwan for Seismic Loss Estimation in Taiwan,” *NTU Journal*, 2002
77. **Loh, C. H.**, S. Wan and W-I. Liao, “Effects of hysteretic model on seismic demands: consideration of near-fault ground motions,” *J. of the Structural Design of Tall Buildings*, 11, 155-169, 2002.
78. Sokolov, V., **C. H. Loh** and K. L. Wen "Evaluation of models for Fourier amplitude spectra for the Taiwan region," *J. of Soil Dynamics and Earthquake Engineering*, 22 (8), 2002, pp. 719-731.
79. Sokolov, V., **C. H. Loh** and K. L. Wen, "Characteristics of strong ground motion during the 1999 Chi-Chi earthquake (Taiwan) and large aftershocks: comparison with the previously established models," *J. of Soil Dynamics and Earthquake Engineering*, Vol. 22(9-12), 2002, pp. 781-790.
80. **C. H. Loh**, W. I. Liao and J. F. Chai, “Effect of near-fault earthquake on bridge: lessons learned from Chi-Chi earthquake,” *J. of Earthquake Engineering and Engineering Vibration*, Vol.1, No.1, 2002, 86-93 *Chinese Institute of Engineers*, Vol.25, No.4, 447-459, 2002.
81. Chai, J.F. and **C. H. Loh**, “Modeling of phase spectrum to simulate design ground motions,” *J. of the*
82. Sokolov, V., **C.H. Loh** and K.L. Wen, "Comparison of the Taiwan Chi-Chi earthquake strong motion data and ground motion assessment based on spectral model from smaller earthquakes in Taiwan" *BSSA*, 2002
83. **Loh, C.H.** and C.Y. Tsay, “Responses of the Earthquake Engineering Community to the Chi-Chi (Taiwan) Earthquake,” *Earthquake Spectra*, EERI, Vol.17, Issue 4, November, 635-656, 2001
84. **Loh, C.H.**, T.C. Wu and N.E. Huang, “Application of EMD+HHT Method to Identify Near-Fault Ground Motion Characteristics and Structural Responses,” *BSSA*, Special Issue of Chi-Chi Earthquake (Editor:

- T. Teng), Vol.91, No.5, 1339-1357, 2001.
85. Yeh, C. H. and Loh, C. H., "Methodology of Seismic hazard Analysis and Damage Assessment," *J. of Earthquake Engineering and Engineering Seismology*, Vol.3, No.1, March 2001, 21-34.
86. Loh, C.H., S. Wan and Y.W. Chang, "Evaluation of Seismic Damage in a Continuous Bridge," *Int. J. of Structural Stability and Dynamics*, Vol.1, No.2, 2001, 235-246.
87. Liao, W. I., C. H. Loh, "Response of RC moment frames subject to near-fault ground motion," *Journal of The Structural Design of Tall Building*, Vol.10, 2001, 219-229.
88. Chang, S. Y., Kuo, P. H. , Chang, K. C., and Loh. C. H. "The Study of Seismic Behaviors of Reinforced Concrete Bridge Columns," *J. of the Chinese Institute of Civil & Hydraulic Engineering*, Vol.13, No.2, 2001, 469-478.
89. Chai, J. F., W. I. Liao, T. J. Teng and C. H. Loh, "Current Development of Seismic Design code to consider the Near-fault effect in Taiwan," *J. of Earthquake Engineering and Engineering Seismology*, Vol.3, No.2, 2001, 47-56.
90. Sokolov, V., C.H. Loh and K.L. Wen, "Empirical Models for Site- and Regional-Dependent Ground Motion Parameters in the Taipei Area: An Unified Approach," *Earthquake Spectra*, EERI, Vol.17, No.2, 2001, 313-332.
91. Sokolov, V., C.H. Loh and K.L. Wen, "Site-dependent design input ground motion estimation for the Taipei area: a probabilistic approach," *Probabilistic Engineering Mechanics*, 16, 2001, 177-191.
92. Wan, Shouan, C.H. Loh and S.Y. Peng, "Experimental and Theoretical Study on Softening and Pinching Effects of Bridge Column," *Soil Dynamics and Earthquake Enging.*, 21, no.1, 2001, 75-81.
93. Huang, C.C. and C.H. Loh, "Nonlinear Identification of dynamic Systems Using Neural Networks," *Int. Journal of Computer Aided Civil and Infrastructures Engineers*, 16, 2001, 28-41.
94. Loh, C.H. and T.S Wu, " System ID of Fei-Tsui Arch Dam from Forced Vibration and Seismic Response Data" *J. of Earthquake Engineering* , Vol.4, No.4, 511-537, 2000.
95. Loh, C.H., C.C. Huang and C.Y. Lin, "Time Domain Identification of Frames under Earthquake Loading," *ASCE, J. of Engineering Mechanics*, Vol.126, No.7 July, 2000, 693-703.
96. Loh, C.H. Z.K. Lee etc. "Ground Motion Characteristics of the Chi-Chi earthquake of September 21, 1999." *Earthquake Engineering and Structural Dynamics*, 29, 2000, 876-897.
97. Loh, C.H., P.Y. Lin and N.H. Chung, "Design of Dampers for Structures based on Optimal Control theory," *Earthquake Engineering and Structural Dynamics*, 29, 2000, 1307-1323.
98. Wan, Shiuan, C.H. Loh, and Y.W. Chang, "Soil-Structural Interaction for Continuous Bridges," *J. of the Chinese Institute of Engineers*, Vol.23, No.4, 2000, 439-446.
99. Chai, J.F., C.H. Loh, C.Y. Chen, "Consideration of the Near-Fault Effect on Seismic Design Code for Sites Near the Chelungpu Fault," *J. of the Chinese Institute of Engineers*, Vol.23, No.4, 2000, 447-454.
100. Liao, W.I., C.H. Loh, S. Wan, W.Y. Jean and J.F. Chai, "Dynamic Responses of Bridges Subjected to Near- Fault Ground Motion," *J. of the Chinese Institute of Engineers*, Vo.23, No.4, 2000, 455-464.
101. Sokolov, V., C.H. Loh and K.L. Wen, "Empirical Model for Estimating Fourier Amplitude Spectra of Ground Acceleration in Taiwan Region," *Earthquake Engineering and Structural Dynamics*, 29, 2000, 339-357.
102. Sokolov, V, C.H. Loh and Y.K. Wen, "Empirical Study of Sediment-filled Basin Response: the Case of

- Taipei City,” *Earthquake Spectra*, EERI, vol.16, No.3, 2000, 681-707.
103. **Loh, C.H.**, P.Y. Lin, N.H. Chung, “ Experimental Verification of Building Control Using Active Bracing System “ *Earthquake Engineering and Structural Dynamics*, 28, 1999, 1099-1119.
104. **Loh, C.H.** and C.H. Yeh, “ Researches related to Seismic Hazard Mitipation in Taiwan,” *J. of the Earthquake Engineering Society of Korea*, Vol.2, No.3, Sept. 1998, 13-26.
105. **Loh, C.H.**, W.Y. Jean and C.S. Hwang, “ Seismic Demand Based on Damage Control Model— Considering Basin Effect and Source Effect,” *Soil Dynamics and Earthquake Engineering*, 1998.
106. **Loh, C.H.**, J.Y. Hwang and T-C. Shin, “ Observed Variation of earthquake motion across a basic— Taipei city, “ *Earthquake spectra*, EERI, Vol. 14, No.1, 115-133. 1998.
107. Lee, Z. K. and **C. H. Loh**, “Substructural Identification of Bridge— A FFT-based Spectral Analysis,” *Structural Dynamics/Earthquake Engineering, JSCE*, Jan.1998. pp.41 ~ 51.
108. 羅俊雄、辛在勤, “嘉義瑞里地震強地動特性, 結構工程, 第13 卷, 第3 期, 1998 年9 月。 pp.5~12.
109. 羅俊雄、楊濱毓, “高樓建築物地震反應系統識別”, 結構工程, 1998 年。
110. **Loh, C. H.** and P. Y. Lin, “Kalman Filter Approach for Control of Seismic-Induced Building Vibration Using Active Mass Driver System,” *J. The Structural Design of Tall Building*, Vol.6, 209-224, 1997.
111. **Loh, C. H.** and M. J. Ma, “Reliability Assessment of Structure Subjected to Horizontal-Vertical Random Earthquake Excitations,” *Structural Safety*, Vol. 19, No. 1 pp. 153–168, 1997.
112. **Loh, C. H.** and Z-K. Lee, “Seismic Moritoring Bridge: Assessing Dynamic Characteristics from Both Work and Strong Ground Excitations,” *Earthquake Engineering and Structural Dynamics*, Vol.26, No.2, pp.269-288, 1997.
113. **Loh, C. H.** and T. S. Wu, "Identification of Fei-Tsui Arch Dam from Both Ambient and Seismic Response Data," *Soil Dynamics and Earthquake Engineering*, (15) pp. 465–483, 1996.
114. **Loh, C. H.** and Chii-Horng Chao, “Effectiveness of Active Tuned Mass Damper and Seismic Isolation on Vibration Control of Multi-Story Building,” *J. of Sound and Vibration*, 193(4), 773–792, 1996.
115. **Loh, C. H.** and J. Y. Duh, “Analysis of Nonlinear System Using NARMA Model,” Proceedings of JSCE, *J. of Structural Engineering/Earthquake Engineering*, No. 537/I-35, April, 1996.
116. **Loh, C.H.**, H.M. Lin, and T.S. Wu “Time Domain Method for the Identification of Dynamic Properties of Building Seismic Response,” *The Chinese Journal of Mechanics*, Vol. 12, No. 3, pp. 339–351, 1996.
117. **Loh, C. H.**, and H. M. Lin, “Application of Offline and On line Identification Techniques to Building Seismic Response Data,” *Earthquake Engineering and Structural Dynamics*, Vol. 25, No. 3, 269–290, 1996.
118. **Loh, C. H.** and M. J. Ma, “Control of Seismic-excited Building Structure Using Variable Damper Systems,” *Engineering Structures*, Vol. 18, No.4, 279–287, 1996.
119. 羅俊雄、王文輝, “多支撐橋梁結構之反應頻譜分析”, 中國土木水利工程學刊 (series D), 1996.
120. **Loh, C. H.**, C. R. Cheng, Y.K. Wen, “Probabilistic Evaluation of Liquefaction Potential Under Earthquake Loading,” *Soil Dynamics and Earthquake Engineering*, Vol. 14, 269–278, 1995.
121. **Loh, C. H.** and I-C Tou, “A System Identification Approach to the Detection of Changes in Both Linear and Nonlinear Structural Parameters,” *Earthquake Engineering and Structural Dynamics*, Vol. 24, No. 1, 85–97, 1995.

122. **Loh, C. H.** and B. D. Ku, "An Efficient Analysis of Structural Response for Multi-Support Seismic Excitation," *J. of Engineering Structure*, Vol. 17, No. 1, 15–26, 1995.
123. 羅俊雄、馬明紀, "日本兵庫縣南部地震與台灣地區強地動特性之比較及討論"結構工程第十卷第二期, 中華民國八十四年六月, 83–92。
124. **Loh, C. H.** and W. Y. Chern, "Seismic Effectiveness of Active Tuned Mass Dampers for the Control of Flexible Structures," *J. of Probabilistic Engineering Mechanics*, 1994. Vol. 9, No. 4, 225–234, 1994.
125. **Loh, C. H.**, W. Y. Jean and J. Penzien "Uniform-Hazard Response Spectra—An Alternative Approach," *Earthquake Engineering & Structural Dynamics*, Vol. 23, 433–445, 1994.
126. 蔡益超、張荻薇、羅俊雄, "公路橋梁耐震設計規範草案與解說"結構工程第九卷第二期, 中華民國八十三年六月, 59–103, June, 1994
127. Ku, B. D., **Loh, C. H.**, and Y. T. Yeh, "Evaluation of Earthquake Ground Motions by Empirical Analysis," *J. of the Chinese Institute of Engineers*, Vol. 16, No. 4, pp. 523–532, 1993.
128. **Loh, C. H.** and S. T. Chung, "A Three-Stage Identification Approach for Hysteretic System," *Earthquake Engineering and Structural Dynamics*, Vol. 22, Feb. pp. 129–150, 1993.
129. **Loh, C. H.**, C. H. Lee and C. C. Kuo, "Identification Study on Base Isolation Systems by Full-Scale Buildings," *Proc. of JSCE, J. of Structural Engineering/Earthquake Engineering*, No. 455, I-21, 169–180, 1992.
130. **Loh, C. H.**, F. S. Baw and Y. T. Yeh, "Seismic Hazard and Uncertainty Analysis of the Taiwan Area," *International Journal of Soil Dynamics and Earthquake Engineering*, Vol. 11, No. 8, pp. 407–508, 1992.
131. **Loh, C. H.** and C. S. Yeh, "Field Evaluation and Site Response Identification at SMART-1 Site," *Soil Dynamics and Earthquake Engineering*, Vol. 11, No. 6, pp. 347–356, 1992.
132. **Loh, C. H.** and J-C, Chang, "Cumulative Damage Parameters for Inelastic System Subjected to Earthquake Excitations," *International Journal of Engineering Structure*, Vol. 14, No. 3, pp. 152–162, 1992.
133. **Loh, C. H.**, Y. T. Yeh, W. Y. Jean, and Y. H. Yeh, "Seismic Hazard Analysis in Taiwan Area: Using Bounded Fault-Rupture Model," *Bulletin Seismology Society of America*, Vol. 81, No. 1, 265–272, 1991.
134. **Loh, C. H.**, Y. T. Yeh, W. Y. Jean, and Y. H. Yeh, "Seismic Hazard Analysis in Taiwan: Based on PGA and Spectral Acceleration Attenuation Formula," *Int. Journal of Engineering Geology* 30, pp. 277–304, 1991.
135. **Loh, C. H.** "Spatial Variability of Seismic Waves and Its Engineering Application," *International Journal of Structural Safety*, 10, pp.95-111, 1991.
136. **Loh, C. H.**, Y. T. Yeh, and W. Y. Jean "Development of Site-Dependent Design Spectra for Taiwan - Results from Statistical and Uniform Hazard Analysis," *Journal of the Chinese Institute of Eng.*, Vol. 14, No. 5, pp. 437–446, 1991.
137. **Loh, C. H.**, "An Approach to Probabilistic Modelling of Strong Ground Motion for Ground Deformation Spectrum," *Bulletin of the College of Eng., National Taiwan University*, No. 52, June, pp. 51–56, 1991.
138. **Loh, C. H.** and S. Z. Lee, "A Seismic Displacement of Multi-Supported Bridge to Multiple

- Excitations,” *Int. Journal of Soil Dynamics and Earthquake Engineering*. Vol. 9, No. 1, pp. 25–33, January 1990.
139. **Loh, C. H.** and R. C. Ho, “Seismic Damage Assessment Based on Different Hysteretic Rules,” *Earthquake Engineering and Structural Dynamics*, Vol. 19, No. 5, pp. 753–772, 1990.
140. **Loh, C. H.** and S. G. Lin, “Directionality and Simulation Study in Spatial Variation of Seismic Waves,” *International Journal of Engineering Structures*, Vol. 12, No. 2, pp. 134–143, April 1990.
141. **Loh, C. H.** and S. Z. Lee, “A Seismic Displacement of Multi-Supported Bridge to Multiple Excitations,” *Int. Journal of Soil Dynamics and Earthquake Engineering*, Vol. 9, No. 1, pp. 25–33, January 1990.
142. **Loh, C. H.**, C. S. Yeh, and G. W. Su, “Development of Stochastic Ground Movement-Study on SMART-1 Array Data,” *Int. Journal of Soil Dynamics and Earthquake Engineering*, pp. 22–31, January 1989.
143. **Loh, C. H.** and R. C. Ho, “Site-Dependent Inelastic Design Spectra,” *Journal of the Chinese Institute of Engineers*, Part D, Vol. 1, No. 3, pp. 203–211, 1989.
144. **Loh, C. H.** and T. H. Tsaur, “Time Domain Estimation of Structural parameters,” *International Journal of Engineering Structures*, Vol. 10, pp. 95–105, April 1988.
145. **Loh, C. H.** and Y. T. Yeh, “Spatial Variation and Stochastic Modelling of Seismic Differential Ground Movements,” *Int. J. of Earthquake Engineering and Structural Dynamics*, Vol. 16, pp. 583–596, 1988.
146. **Loh, C.H.** and Wen-Lee Hwang, “Reliability Analysis of Wind-Loaded Structures,” *Proceedings of the National Science Council, R.O.C.*, Part A, Vol. 12, No. 1, pp. 50–60, 1988.
147. Chang, S. Y., **Loh, C. H.**, and S. S. Chen, “Distribution of Seismic Hazards and Risk Analysis of Buried Pipelines in Taiwan,” *Journal of the Chinese Institute of Engineers*, Vol. 11, No. 1, pp. 11–23, 1988.
148. Tsai, C. C., **Loh, C. H.**, and Y. T. Yeh, “Analysis of Earthquake Risk in Taiwan Based on Seismogenic Zones,” *Memoir of the Geological Society of China*, No. 9, pp. 413–446, 1987.
149. **Loh, C. H.**, “Application of Correlation and Spectral Analysis to Earthquake Data,” *Journal of the Chinese Institute of Engineers*, Vol. 9, pp. 117–126, 1986.
150. **Loh, C. H.**, “Analysis of Spatial Variation Seismic Waves and Ground Movements from the SMART-1 Array Data,” *Int. Journal of Earthquake Engineering and Structural Dynamics*, Vol. 13, pp. 561–581, 1985.
151. **Loh, C. H.**, K. L. Peng, “Identification of Array Data by Multifilter Technique,” *Journal of the Chinese Institute of Engineers*, Vol. 8, No. 2, pp. 97–107, 1985.
152. **Loh, C. H.**, “Seismic Hazard Analysis Based on Attenuation Equation Model,” *Bulletin of the Institute of Earth Sciences*, *Academia Sinica*, Vol. 4, pp. 73–99, December 1984.
153. **Loh, C. H.**, J. Penajien, Y. B. Tsai, “Engineering Analysis of SMART-1 Seismic Data” *International Journal of Earthquake Engineering and Structural Dynamics*, Vol. 10, pp. 575–591, August 1982.
154. Tang, J. P. and **Loh, C. H.**, “Vibration Measurement of Simple Prestressd Bridge Girders and Data Analysis by Using Random Decrement Method” *Engineering Journal*, Vol.51, No.3, March 1978 (in

Chinese)

Conference papers

(2014) 5 articles

- **Loh, C. H.** “Time-Frequency Analysis of Feature Variation In Civil Engineering Structure Under Strong and Weak Earthquake Excitation,” *Proceedings of 5th Asia-conference on Earthquake Engineering*, October 16-18, 2014, Taipei, Taiwan. (Keynote Presentation).
- Yu-Ting Huang, Wan-Ying Hsiung, **Chin-Hsiung Loh**, Yuan-Sen Yang, Kenneth J. Loh, “Time-frequency and Image Analyses of Rotating Blades in Small-scale Wind Turbines,” *Proceedings of the 6th World Conference on Structural Control & Monitoring*, July 15-17, 2014, Barcelona, Spain.
- **Chin-Hsiung Loh** and Shu-Hsien Chao, “Application of subspace identification technique to long-term seismic response monitoring of structures,” *Proceedings of the 7th European Conference on Structural Health Monitoring*, July 8-11, 2014, Nantes, France.
- Yu-Ting Huang, Wan-Ying Hsiung, Yuan-Seen Yang, **Chin-Hsiung Loh**, “Application of Image Analysis and Time-Frequency Analysis for Tracking the Rotating Blades Vibration,” *Proceeding of SPIE Structures/NDE conference*, March 12-16, 2014, San Diego, USA, (Paper ID: 9021-36).
- Wan-Ying Hsiung, Yu-Ting Huang, Chin-Hsiung Loh, Kenneth J. Loh, Robert J. Kamisky, Danny Nip, and Cornelis van Dam, “Analyzing the Dynamic Response of Rotating Blades in Small-scale Wind Turbines,” *Proceeding of SPIE Structures/NDE conference*, March 12-16, 2014, San Diego, USA, (Paper ID: 9021-84).

(2013) 6 articles

- Liu, Y.C., T.H. Wu, **Loh, C.H.** and Y.Q. Ni, “Variation of modal parameters of Canton tower under different earthquake excitations,” 6th Int. Conf. on Structural Health Monitoring of Intelligent Infrastructures, Hong Kong, 9-11, December, 2013.
- **Loh, C.H.**, Wu, T.H. and Ni, Y.Q., “Input Force Reconstruction Using Response Measurements,” *Proceedings of IWSHM*, Stanford University, Sept. 11-3, 2013
- **Loh, C.H.** et al. “Assessment of vibration-based on-line damage identification techniques,” ICOSAR-2013, Columbia University, June 16-20 (ID10).
- Symth, A., Masri, S.F. and **Loh, C.H.**, “Nonstationary excitation data condensation for analytical probabilistic dynamic response analysis,” ICOSAR02013, Columbia Univ., June 16-20 (MS-PMNH03)
- **Loh, C.H.** and Chao, S.H., “Vibration-based damage identification of reinforced concrete member using optical sensor array data,” SPIE, Paper ID: 8692-08
- Wu, Y.C. and **Loh, C.H.**, “Application of Efficient Model Correction for Damage Assessment using Limited Measurements,” IMAC-XXXII, California, US, Feb. 10-14, 2013

(2012) 8 articles

- **Loh, C. H.** and Chao, S. H., “Application of Singular Spectrum Analysis to Bridge Structure Health Monitoring and Damage Detection, ,” SMASIS-2012, September 2012
- **Loh, C. H.**, Chen, M. C. and Chao, S. H. “Online Monitoring and Damage Detection of Bridges under Environmental Loadings,” 1st National Conference on Earthquake Engineering, Taiwan, Sept. 2012

- Chao, S. H. and **Loh, C. H.** “Covariance Based Stochastic Subspace Identification of Multiple Setups and Multiple Measurements Data,” 1st National Conference on Earthquake Engineering, Taiwan, Sept 2012
 - Chang, Y. W., Loh, C. H. and Jean, W. Y., “Seismic Hazard Re-Analysis of Taiwan With the Consideration of Model Parameter Uncertainty,” 5th Asian-Pacific Symposium on Structural Reliability and its Application, Singapore, May, 2012.
 - **Loh, C. H.**, Chen, M. C., Chao, S. H., “Stochastic subspace identification for operational modal analysis of an arch bridge,” SPIE 2012 Smart Structure/NDE Conference, Paper ID-8345-03, March 2012
 - Lew, J. S. and **Loh, C. H.**, “Real-Time Aircraft Structural Damage Identification with Flight Condition Variations,” SPIE 2012 Smart Structure/NDE Conference, Paper ID-8347-52, March 2012
 - Chao, S. H., **Loh, C. H.**, Weng, J. H., “Application of higher order SVD to vibration - based system identification and damage detection,” SPIE 2012 Smart Structure/NDE Conference, Paper ID-8345-73, March 2012
 - **Loh, C. H.** and J. H. Li, “Application of Deteriorating Distributed Element Model to Enhancing Seismic Response of Reinforced Concrete Frame through Time- Frequency Decomposition,” IMAC-XXX Conference & Exposition on Structural Dynamics, Jacksonville, Florida, January 30-February 2, 2012.
- (2011) 8 articles**
- **Chin-Hsiung Loh***, Yi-Cheng Liu, Shu-Hsien Chao , “Damage Diagnosis Using Time Series Analysis from Vibration Measurements: Application to bridge scouring stimulus;” The 2011 International Conference on Smart Structures and Systems (ICOSSS'11), Sept. 2011.
 - **C.H. Loh**, Y. C. Liu, Y.Q. Ni, “SSA-Based stochastic subspace identification of structures from output-only vibration measurements,” 8-th Int. Workshop on Structural Health, Stanford University, Sept. 13-15, 2011.
 - **C.H. Loh**, Y. C. Liu, F. M. Wu, “Integrate on-line RSSA and RSSI-COV algorithm for operational modal analysis of bridge structure,” 8-th Int. Workshop on Structural Health, Stanford University, Sept. 13-15, **(2011)**.
 - **C.H. Loh**, F. M. Wu and S.H. Chao, “In Situ Structural Health Monitoring for Bridges Under Ambient Stimulus: Effect of Scouring,” ASCE, Engineering Mechanic Institute, Northeastern University, MA, June 2-4, 2011.
 - **C. H. Loh**, and Y. C. Liu, “Determination of Reliable Control Parameters for Monitoring of Large Flexible

Structure Using Recursive Stochastic Subspace Identification, EURODTN-2011, July, Leven, Belgium, 2011.

- Y. C. Liu and **C. H. Loh**, “Stochastic Subspace Identification for Output-only Modal Analysis: Accuracy and Sensitivity on Modal Parameter Estimation,” SPIE Smart Structure/NDE, San Diego, USA, 6-10 March, 2011.
- **C. H. Loh** and Y. C. Liu, “Integrate On-line Recursive SSA and SSI-COV Algorithms for Operational Modal Analysis of Structures,” The 5th Cross-strait Conference on Structural and Geotechnical Engineering (13-15 July, 2011), Hong Kong, China.
- S. H. Chao and **C. H. Loh**, “Application of singular spectrum analysis to the health monitoring of the bridge structure,” The 5th Cross-strait Conference on Structural and Geotechnical Engineering (13-15 July, 2011), Hong Kong, China.

(2010) 10 articles

- **Loh, C.H.** and J. H. Weng, “online tracking of structural parameters based on recursive subspace identification,” Proceedings of ASME 2010 Conference on Smart Materials Adaptive Structures and Intelligent Systems, Philadelphia, Sept.28~Oct.2, 2010
- **Loh, C. H.**, Weng, J. H. And Chen, C. H., “System identification of story-isolation building from both ambient and earthquake response data,” Proceedings of the 5th World Conference on Structural Control, Tokyo, Japan, July, 2010.
- Chao, S. H. and **Loh, C. H.**, “Output-Only dynamic system Identification using blind source separation technique,” Proceedings of the 5th World Conference on Structural Control, Tokyo, Japan, July, 2010
- **Loh, C. H.**, “Emergency Management / Response / Recovery against MC&MD (Mega-City and Mega-Disaster),” The Int. Symposium on Advances in Urban Safety (SAUS2010), Kobe, Japan, March 27, 2010.
- K. C. Lu and **Loh, C.H.**, “Development of improved wireless sensing system for SHM,” ASCE Earth & Space 2010 Conference, Honolulu, March 14 – March 17, 2010
- Weng, J. H. and **Loh, C. H.**, “System identification of arch dam using both ambient and earthquake response data,” ASCE Earth & Space 2010 Conference, Honolulu, March 14 – March 17, 2010
- **Loh, C. H.**, C. H. Mao and J. R. Huang, “System Identification and Damage Detection of Degrading Hysteresis of Reinforced Concrete Frames,” Proceedings of 7th Int. Conf. on Urban Earthquake Eng. (7CUEE) & 5th Int. Conf. on Earthquake Eng. (5ICEE), March 3-5, 2010, Tokyo Institute of Technology, Tokyo, Japan

- R. Andrew Swartz, Yang Wang, Jerome P. Lynch, Kincho H. Law, and **Chin-Hsiung Loh**, “Experimental Validation of Market-based Control Using Wireless Sensor and Actuator Networks,” Proceedings of 7th Int. Conf. on Urban Earthquake Eng. (7CUEE) & 5th Int. Conf. on Earthquake Eng. (5ICEE), March 3-5, 2010, Tokyo Institute of Technology, Tokyo, Japan
- Lu, K. C. and **Loh, C. H.**, “Development of Smart Sensing System for Structural Health Monitoring,” SPIE Smart Structure/NDE, San Diego, USA, 8-12 March, 2010.
- **Loh, C. H.**, C. H. Chen and C. H. Mao, “Detecting seismic response signals using Singular Spectrum Analysis,” SPIE Smart Structure/NDE, San Diego, USA, 8-12 March, 2010.

(2009) 13 articles

- **Loh, C. H.**, C. H. Mao and J. R. Huang, “Damage identification of degrading hysteresis of reinforced concrete frames,” Proceedings of the 6th National Workshop on Nondestructive Evaluation of Civic Infrastructural System (NDECIS’09), National Taiwan University, October 2009.
- **Loh, C. H.**, T. Y. Hsu and C. H. Chen, “Structural Health Monitoring for Fei-Tsui Arch Dam Using Both Static and Dynamic Measurements: Uncertainty Analysis,” International Symposium on Risk-Based Life-Cycle Engineering, NTUST, Taiwan, Oct. 2009.
- Chao, S. H. and **Loh, C. H.**, “Identification and Simulation of Reinforced Concrete Frames Subjected to Static and Dynamic Load,” Proceedings of the 7th Int. Workshop on SHM, Stanford University (Vol.2), Sept. 2009. p.1413.
- Huang, S. K. **Loh, C. H.** and P. Y. Lin, “Damping Identification of Cable Vibration with and without MR Dampers,” Proceedings of the 7th Int. Workshop on SHM, Stanford University (Vol.2), Sept. 2009, p. 1421.
- Weng, J. H. and **Loh, C. H.**, “Damage Detection Using Stochastic Subspace Identification with Partial Measurements,” Proceedings of the 7th Int. Workshop on SHM, Stanford University (Vol.2), Sept. 2009, p.2051.
- Swartz, A. R., Lynch, J. P. and **Loh, C. H.** “Decentralized Damage Detection by Transfer Function Pole Migration in Dense Sensor Networks,” Proceedings of the 7th Int. Workshop on SHM, Stanford University (Vol.2), Sept. 2009.p. 2107.
- **Loh, C. H.**, S. H. Chao, J. H. Weng and W. I. Liao, “Identification of Damage in Reinforced Concrete Structures from Different Levels of Earthquake Excitations,” 12th International Conference on Fracture, Ottawa, Canada, July, 2009.

- B. Tyson¹, C. Rodriguez, P.Y. Lin, D. Shook, **C. H. Loh**, and P. N. Roschke., “Fuzzy Control of Stay Cable Vibration Using Magnetorheological Dampers and Optimal Sensor Placement,” Spring Meeting of the Texas Section of ASCE, April 2009.
- **Loh, C. H.**, J. P. Lynch and K.J-H. Loh, “Sensing Technologies for Post-Earthquake Rapid Damage Assessment,” International Conf. in Commemoration of the 10th Anniversary of 921 Chi-Chi Earthquake, Taipei, Taiwan, July 2009.
- K. C. Lu, **C. H. Loh** and J. H. Weng, “Turning the building into a smart structure: Integrating Health Monitoring,” SPIE Smart Structure/NDE, San Diego, USA, 8-12 March, 2009 (Paper Number: 7292-102).
- J. H. Weng and **C. H. Loh**, “Paper Number: 7292-62 Identification of RC structure during earthquake excitation ,” SPIE Smart Structure/NDE, San Diego, USA, 8-12 March, 2009 (Paper Number: 7292-62)
- P. Y. Lin, S. K. Huang, K. S. Cheng and **C. H. Loh**, “Application of SMC algorithm and smart damping device on the control of building structure,” SPIE Smart Structure/NDE, San Diego, USA, 8-12 March, 2009 (Paper Number: 7292-48)
- T. Y. Hsu and **C. H. Loh**, “Damage detection using frequency response functions under ground excitation,” SPIE Smart Structure/NDE, San Diego, USA, 8-12 March, 2009 (Paper Number: 7292-132).

(2008) 13 articles

- **C. H. Loh**, A. L. Wu, J. H. Weng, C. H. Chen, T. S. Ueng, “Input Force Identification: Numerical and Experimental Studies,” International Symposium on Structural Control and Health Monitoring, Tai-Chung, Taiwan, Jan. 10-11, 2008
- Kung-Chun Lu, **Chin-Hsiung Loh**, J. N. Yang, Pei-Yang Lin, “Decentralized Sliding Mode Control of Building Using MR-Dampers,” The 15th International Symposium on: Smart Structures and Materials & Nondestructive Evaluation and Health Monitoring, 9-13 March 2008 (Paper Number: 6932-34)
- Yu-Cheng Fan, Pei-Yang Lin, **Chin-Hsiung Loh**, Jann N. Yang, “Performance Evaluation of Semi-Active Equipment Isolation System Using MR-dampers,” The 15th International Symposium on: Smart Structures and Materials & Nondestructive Evaluation and Health Monitoring, 9-13 March 2008 (Paper Number: 6932-35).
- **Chin-Hsiung Loh**, Ai-Lun Wu, Jann N. Yang, Chia-Han Chen, Tzou-Shin Ueng, “Input Force Identification Using Kalman Filter Techniques: Application to Soil-Pile Interaction,” The 15th International Symposium on: Smart Structures and Materials & Nondestructive Evaluation and Health Monitoring, 9-13 March 2008 (Paper Number: 6932-73).

- W.I. Liao, H. Gu, C. Olmi, G. Song, Y. L. Mo, and **C.H. Loh**, “Structural Health Monitoring of a Concrete Column Subjected to Shake Table Excitations Using Smart Aggregates,” 2008 ASCE Earth & Space Conference on Intelligent Sensors and Actuators Symposium, Long Beach, March, 2008
- Kung-Chun Lu, **Chin-Hsiung Loh**, Jann. N. Yang, “Building Control Using MR-Dampers: Centralized versus Decentralized Control,” 2008 ASCE Earth & Space Conference on Intelligent Sensors and Actuators Symposium, Long Beach, March, 2008
- **C.-H. Loh**, A.K. Agrawal, J. P. Lynch and Jann N. Yang, “Development of experimental benchmark problems for international collaboration in structural response control,” Fourth International Conference on Bridge Maintenance, Safety and Management, IABMAS'08, Seoul, Korea, July 13-17, 2008
- **C.H. Loh**, A.K. Agrawal*, J.P. Lynch and J.N. Yang, “Development of Experimental Benchmark Problems for International Collaboration in Structural Response Control,” Proc. of The 4th Int. Conf. on Advances in Structural Engineering and Mechanics (ASEM'08), South Korea, May 26~28, 2008.
- K. C. Lu and **Chin-Hsiung Loh**, „STRUCTURAL CONTROL USING SMART CONTROL DEVICES,” Int. Workshop on Structural Health Monitoring (CANSMART-08), Montreal, Canada, October 2008.
- Ting-Yu Hsu and **Chin-Hsiung Loh**, “Damage Localization and Quantification Accommodating Nonlinear Environmental Effects by Nonlinear Principal Component Analysis,” 2nd Asia-Pacific Workshop on Structural Health Monitoring, Melbourne, Australia, December, 2008.
- Jian-Huang Weng, **Chin-Hsiung Loh** and Jann N, Yang, “Finite Element-Based Damage Detection from Experimental Modal Analysis Results,” 2nd Asia-Pacific Workshop on Structural Health Monitoring, Melbourne, Australia, December, 2008.
- **Loh, Chin-Hsiung**, “Turning the Civil and Mechanical Infrastructures into a “Smart” Structures,” Specialist Workshop Structural Health Monitoring: Future Directions, Melbourne, Australia, December, 2008.

(2007) 12 articles

- **Chin-Hsiung Loh**, “Structural health monitoring and control using advanced technologies,” Proc. of 8th Pacific Conf. on Earthquake Engineering (PCEE), Singapore, 05 – 07 December 2007.
- Ai-Lun Wu and **Chin-Hsiung Loh**, “Input force estimation using system identification techniques,” Proc. of 8th Pacific Conf. on Earthquake Engineering (PCEE), Singapore, 05 – 07 December 2007.
- Jeng-Huang Weng and **Chin-Hsiung Loh**, “Modal identification and damage detection using data driven stochastic subspace identification,” Proc. of 8th Pacific Conf. on Earthquake Engineering (PCEE), Singapore, 05 – 07 December 2007.
- Ting-Yu Hsu and **Chin-Hsiung Loh**, “Damage detection accommodating nonlinear environmental

conditions using nonlinear principal component analysis,” Int. Workshop on Structural Health Monitoring (CANSMART), Montreal, Canada, October 2007

- **Chin-Hsiung Loh** and Shieh-Gown Huang, “On-line Physical Parameter Estimation and Damage Detection with Adaptive Kalman Filtering Approach,” *Proceedings of International Workshop on Health Monitoring, Stanford University, September, 2007*
- Shu-Hsien Chao and **Chin-Hsiung Loh**, “Performance Evaluation of Different Structural Systems Subjected to Near-Fault Ground Motions: Drift Demands,” Proceedings of the 10th International Conf. on Applications of Statistics and Probabilities in Civi Engineering, Univ. of Tokyo, Japan, July, 2007
- Chiun-Lin Wu, Wu-Wei Kuo, Yung-Shen Yang, Shyh-Jiann Hwang and **Chin-Hsiung Loh**, “Dynamic collapse simulation of a 3 bay RC frame under extreme earthquake loadings,” Proc. of 2007 Structural Congress, Long Beach, California, May, 2007.
- Sung-Chieh Hsu, Kung-Chun Lu, Pay-Yang Lin, **Chin-Hsiung Loh**, Jerome P. Lynch, “Application of wireless sensing and control system to control an un-symmetric building with MR-dampers,” SPIE Symposium on The 14th International Symposium on: Smart Structures and Materials & Nondestructive Evaluation and Health Monitoring, San Diego, March 2007 (paper ID: 6529-138)
- **Chin-Hsiung Loh**, Ai-Lun Wu, Shieh-Gown Huang, Shu-Hsien Chao, “Reference-based damage diagnosis of structure using embedded statistical model,” SPIE Symposium on The 14th International Symposium on: Smart Structures and Materials & Nondestructive Evaluation and Health Monitoring, San Diego, March 2007 (paper ID: 6529-100)
- Y. Wang, R.A. Swartz, J.P. Lynch, K.H. Law, **C.-H. Loh**, "Performance Evaluation of Decentralized Wireless Sensing and Control in Civil Structures," *Proc. of the SPIE 14th International Symposium on Smart Structures and Materials & Nondestructive Evaluation and Health Monitoring*, San Diego, CA, USA, March 18 - 22, 2007.
- Wang Yang, J. P. Lynch, K. H. Law, **C. H. Loh**, A. Elgamal, "Reliable information management in a low-cost wireless structural monitoring and control network". SPIE Symposium on The 14th International Symposium on: Smart Structures and Materials & Nondestructive Evaluation and Health Monitoring, San Diego, March 2007.

(2006) 19 articles

- T. Y. Hsu and **C. H. Loh**, “Damage Diagnosis of Frame Structure Using Modified Modal Strain Energy Change Method,” Proc. of 1st Int. Workshop on Structural Health Monitoring, Yokohama, Japan, Dec 12-14, 2006
- **C. H. Loh**, J. P. Lynch, C. M. Chang, K. C. Lu and P. Y. Lin, “Application of Wireless Active Sensing Units to Control a Structure Using MR-Dampers,” Proceedings of 17th Int. conf. on Adaptive Structure and Technologies, (ICAST-2006), Taipei, Taiwan, October, 2006
- Lu, K. C., Y. S. Yang, **C. H. Loh**, J. P. Lynch, K. H. Law, “Structural health monitoring and damage diagnosis: based on embedded algorithm and visualized user interface,” Proceedings of US-Taiwan Workshop on Smart Structural Technology and Seismic Hazard Mitigation, Taipei, Taiwan, Oct. 12-14, 2006.
- Chiun-lin Wu, Yuan-Sen Yang, Shyh-Jiann Hwang, **Chin-Hsiung Loh**, “Dynamic collapse of ductile rc columns under near-fault earthquake,” *Proceedings of 4-ICEE, Paper NO.: 47*, Taipei, Taiwan, October

12-14, 2006

- Ching-Yun Kao , **Chin-Hsiung Loh** and S. T. Mau, “Seismic response identification of building soil-structure interaction using neural networks and genetic algorithm,” *Paper NO.:* 166, 4ICEE, Taipei, Taiwan, Oct. 2006.
- Yang Wang, R. Andrew Swartz, Jerome P. Lynch, Kincho H. Law, Kung-Chun Lu, **Chin-Hsiung Loh**, “decentralized real-time velocity feedback control of structures using wireless sensors,” *Paper NO.:* 207 *Proceedings of 4-ICEE, Paper NO.:* 47, Taipei, Taiwan, October 12-14, 2006
- **Chin-Hsiung Loh**, “Structural health monitoring: progress, potential and challenges” *Paper NO.:* 278 (*Keynote Lecture*) *Proceedings of 4-ICEE, Paper NO.:* 47, Taipei, Taiwan, October 12-14, 2006
- **Chin-Hsiung Loh** et al. “Estimation of permanent ground displacement from near-fault strong motion accelerogram,” Proc. of 1st European Conf. on Earthquake Engineering and Seismology, Geneva, Switzerland, Sept. 2006.
- Sokolov, V., **Loh, C. H.** And Jean, W. Y., “Application of H/V Fourier spectral ratio for analysis of site effect on rock site in Taiwan,” Proc. of 1st European Conf. on Earthquake Engineering and Seismology, Geneva, Switzerland, Sept. 2006.
- Kao, C. Y., **Loh, C. H.** and Mau, S.T., “Artificial Neural Networks and Genetic Algorithm for Seismic Response Identification of Building Soil-structure Interaction,” 8th Int. Conf. on Motion and Vibration Control (MOVIC -2006), Daejeon, Korea, August 2006
- S. H. Chao and **C. H. Loh**, “Collapse potential analysis using FAM with the implementation of inelastic hysteretic model and P-delta effect,” 8-US NCEE, San Francisco, USA, April, 2006
- C. L. Wu, Y. S. Yang and **C. H. Loh**, “Dynamic gravity load collapse of non-ductile RC frames: Experimental approach,” 8-US NCEE, San Francisco, USA, April, 2006
- J. P. Lynch, Y. Wang, K. C. Lu, T. C. Hou and **C. H. Loh**, “Post-seismic damage assessment of steel structures instrumented with self-interrogating wireless sensors,” 8-US NCEE, San Francisco, USA, April, 2006
- W. I. Liao, Y. L. Mo, **C. H. Loh**, “Shaking table tests of low-rise shear walls,” 8-US NCEE, San Francisco, USA, April, 2006
- Y. S. Yang, C. L. Wu, **C. H. Loh**, C. H. Lin, “Dynamic gravity load collapse of non-ductile RC frames: Computational approach,” 8-US NCEE, San Francisco, USA, April, 2006
- V. sokolov, **C. H. Loh**, W.Y. Jean, “Analysis of strong ground motion source scaling and attenuation models from earthquakes located in different source zones in Taiwan,” 8-US NCEE, San Francisco, USA, April, 2006
- K. Lu, Y. Chen, J.P. Lynch, Y. Wang, P.Y. Lin, Z. K. Lee and **C. H. Loh**, “Ambient vibration study of Gi-Lu bridge: Application of wireless sensing unit,” SPIE conference on Smart Structures and Materials, Feb. 2006.
- Y. Wang, R. A. Swartz, J. P. Lynch, K. H. Law, K.-C. Lu, and **C.-H. Loh**, "Wireless Feedback Structural Control with Embedded Computing," *Proc. of the SPIE 11th International Symposium on Nondestructive Evaluation for Health Monitoring and Diagnostics* , San Diego, CA, February 26 - March 2, 2006
- Hsu, D.Y. and **C. H. Loh**, “Discussion on Damage Detection of A 3-D Frame Structure Using Modal Strain Energy Change,” Int. Conf. on Modal Analysis (IMAC-XXIV), St Louis, Feb. 2006.

(2005)

- P. Lynch, K. J. Loh, T.-C. Hou, Y. Wang, J.-H. Yi, C.-B. Yun, K. Lu, and C.-H. Loh, "Validation Case Studies of Wireless Monitoring Systems in Civil Structures," *Proc. of the 2nd International Conference on Structural Health Monitoring of Intelligent Infrastructure (SHMII-2)*, Shenzhen, China, November 16-18, 2005.
- C. H. Loh and C. J. Ku, "Application of Wavelet Transforms to Damage Detection & System Identification in Frame Structure," *Proc. of The Second International Workshop on Advanced Smart Materials and Smart Structures Technology*, Gyeong-ju, Korea, July 21-24, 2005.
- C. H. Loh and C. H. Liu, "Application of model-based damage identification to a seismically loaded structure," *International Workshop on Structural Health Monitoring*, Stanford University, Palo alto, USA, September, 2005.
- C. Y. Kao and C. H. Loh, "Artificial neural networks for nonlinear analysis of bridges," *Int. Conf. on Safety & Reliability of Engineering Systems & Structures*, Rome, Italy, June, 2005
- C. H. Loh & C. M. Chang "Vibration control of cable-stayed bridge using MR-dampers: MATLAB-based approach," *Int. Conf. on Safety & Reliability of Engineering Systems & Structures*, Rome, Italy June, 2005

(2004)

- **Loh, C.H.** and Chau, S. S., "The use of damage function in performance-based seismic design of structures," *13WCEE*, Vancouver, August, 2004, paper #3257.
- Lin, P.Y., P.N. Roschke, **C. H. Loh** and C. P. Cheng, "Semi-Active controlled based-isolation system with MR dampers and pendulum system," *13WCEE*, Vancouver, August, 2004, paper #691.
- Wu, C.L., **Loh, C.H.**, Yang, Y.S. and Lin, C.H., "Consideration of collapse and residual deformation in reliability-based performance evaluation of building," *13WCEE*, Vancouver, August, 2004, paper #716.
- Wu, C.L., C. C. Lin and **C. H. Loh**, "Reliability-base seismic design of near-fault bridge structures in Taiwan," *13WCEE*, Vancouver, August, 2004, paper #746.
- **Loh, C. H.** and T. H. Wu, "Critical Assessment on parametric time-domain methods for the identification of vibrating structures," *SPIE 11th Annual Int. Symposium on Smart Structures and Materials*, San Diego, March 2004.

(2003)

- **Loh, C.H.**, T.H. Wu, C.C. Tseng and C.Y. Kao, "Experimental Study of Identification of RCS Structure: Using Pseudo-dynamic Testing Data," *Proceedings of Structural Health Monitoring and Intelligent Infrastructure*, Editors: Z. Wu and M. Abe, Tokyo, Japan, November 2003, p. 437-445.
- Kao, C.Y., C.C. Tseng, **C.H. Loh** and T.H. Wu, "Neural Networks for Nonlinear Identification and Diagnosis of Structures," *Proceedings of Structural Health Monitoring and Intelligent Infrastructure*, Editors: Z. Wu and M. Abe, Tokyo, Japan, November 2003, p. 619-627.
- **Loh, C. H.** and C. Y. Lee, "Seismic Risk Assessment of Transportation System: Evaluation Immediately After Earthquake," *TCLEE conference*, 2003.
- **Loh, C. H.** and S. T. Chung, "Uncertainty of seismic input and capacity format in performance -based seismic analysis," *Proceedings of 9-th Int. Conf. on Applications of Statistics and Probability in Civil Engineering*, San Francisco, July 6-9,2003.

(2002)

- Wu, C. L. and **C. H. Loh**, “Nonlinear Wave Propagation in Multi-story Building,” Proceedings of 2nd Int. Conf. on Structural Stability and Dynamics, Singapore, December, 2002.
- Lin, P. Y., L. L. Chung and **C. H. Loh**, “Experimental study of seismic protection for structures using MR damper,” Proceedings of 12 ECEE, London, September, 2002 (paper no. 249).
- J. F. Chai, T. J. Teng and **C. H. Loh**, “Determination of ground period and site-dependent design response spectrum for Taiwan high speed rail,” Proceedings of 12 ECEE, London, September, 2002 (paper no. 121).
- C. H. Loh, “NCREE Research Activities: Present and Future,” Proceedings of ICANCEER, Harbin, China, August 15-17, 2002
- C. H. Yeh and **C. H. Loh**, “Application of HAZ-Taiwan in Seismic Disaster Scenario of Taipei city,” Aisa Pacific Review of Engineering Science and Technology, Vol.1, No.1, April, 2002, 11-27 (in Chinese).
- **Loh, C. H.**, “Seismic Risk analysis of lifeline system using strong motion array data,” Proceedings of 7th US National Conference on Earthquake Engineering, Session 33 LL-1, Boston, July 21-25, 2002.
- **Loh, C. H.**, W. I. Liao and C. F. Chai, “Effects of Near-Fault Ground Motion on Bridges: Lessons Learned from Chi-Chi Earthquake,” Proceedings of 3rd national Conference and workshop on Bridges and Highways, Portland, April 29 –May 1, 2002,
- **Loh, C. H.**, “Structural Control Research in Taiwan,” Keynote Lecture, Proceedings of 3rd World Conference on Structural Control, Como, Italy, April, 7-12, 2002.
- **Loh, C. H.**, T. S. Wu, T. C. Tseng and C. C. Hsu, “Comparison on System Identification Using Adaptive Identification and Parametric Time-Frequency Method,” Proceedings of 3rd World Conference on Structural Control, Como, Italy, April, 7-12, 2002.
- P. Y. Lin, L. L. Chung and **C. H. Loh**, “Semi-active controlled building structure with STMD,” *Ninth Int. Conf. on Computing in Civil and Building Engineering (ICCCBE-IX)*, Taipei, April 3-5, 2002
- T. H. Wen and **C. H. Loh**, “Performance-based design of seismic behavior of girder-column joint,” *9th Int. Conf. on Computing in Civil and Building Engineering (ICCCBE-IX)*, Taipei, April 3-5, 2002
- **C. H. Loh** and L. Y. Wu, “Application of MR dampers to base isolated system using semi-active control strategy,” *9th Int. Conf. on Computing in Civil and Building Engineering (ICCCBE-IX)*, Taipei, April 3-5, 2002.

(2001)

- **Loh, C. H.**, J. F. Chai, W. I. Liao and T. J. Teng, “The current development of seismic design code in Taiwan,” Proceedings of 3rd US-Japan Workshop on Performance-based Earthquake Engineering Methodology for Reinforced Concrete Building Structures, Seattle, August, 2001, pp. 19-28.
- **Loh, C. H.**, “Development of Bridge Seismic Monitoring Program in Taiwan,” Proceedings of IABSE

Conference Seoul 2001 on Cable-Supported Bridges, Seoul, Korea, 12-14 June, 2001

- **Loh, C. H.**, T. C. Wu and T. C. Tseng, “Application of Both EMD+HHT and Short Time Fourier Transform to the Identification of Building Seismic Response Data,” Proceedings of ICSSAR’01, Newport Beach, CA, 17-22 June, 2001
- S. C. Yeh and **C. H. Loh**, “Seismic Reliability analysis for Highway Network System,” Proceedings of ICSSAR’01, Newport Beach, CA, 17-22 June, 2001
- **Loh, C.H.** and S.C. Chien, “ Identification of Damping and Stiffness Matrix from Building Response Measurement,” SPIE’s Int. Symposium on NDE for Health Monitoring and Diagnostics, 4-8, March, Newport Beach, CA, 2001.

(2000)

- Jean, W.Y. and **C.H. Loh**, “Seismic Design Implication of 1999 Taiwan Chi-Chi Earthquake,” Proceedings of 1st Int. Conf. On Structural Stability and Dynamics, 7-9, December, Taipei, 2000, 641-646.
- K.H. Chen and **C.H. Loh**, “Quasi-Static Pushover Analysis for Damage Assessment of Seismically Designed Continuous Bridge,” Proceedings of 1st Int. Conf. On Structural Stability and Dynamics, 7-9, December, Taipei, 2000, 825-83
- **Loh, C. H.**, V. Sokolov, K. L. Wen, “Empirical Models for Estimating Design Input Ground Motions in Taiwan Region,” Proceedings of 1st Int. Conf. On Structural Stability and Dynamics, 7-9, December, Taipei, 2000, 23-2
- **Loh, C. H.**, S. R. Lawson and W. M. Dong, “Development of A National Earthquake Risk Assessment Model for Taiwan,” Proceedings of 12 WCEE, paper No. 380, Auckland, New Zealand, 2000.

(1999)

- **Loh, C.H.**, P. Y. Lin and N. H. Chung, “Design of Dampers for Structures Based on Optimal Control Theory,” Proceedings of the Int. Post-SMiRT conference Seminar, Cheju, Korea, August, 1999, 497-506.
- **Loh, C.H.** and C.C. Huang, “Damage Identification of multi-Story Steel Frames Using Neural Network,” Proceedings of Structural Health Monitoring, Stanford Univ., Sept. 8-10, 1999, PP. 390-399.
- Chen, K.H. and **C.H. Loh**, “Simplified Inelastic Analysis of Bridge Pier Considering Isolation System,” Proceedings of the 5th US National conference on Lifeline Earthquake Engineering, Seattle, Aug, 1999. PP.371-378.
- **Loh, C.H.** V. Sokolov, T.S. Wu and W.Y. Jean, “Ground Motion Characteristics in Taiwan as Related to HAE-Taiwan,” Proceedings of 1999 Workshop on Disaster Prevention / Management and Green Technology, Foster City, CA., June, 1999.
- C.H. Yeh, C.Y. Lee and **C.H. Loh**, “ Workframe Earthquake Loss Estimation Method in Taiwan,” Proceedings of 1999 Workshop on Disaster Prevention / Management and Green Technology, Foster City, CA., June, 1999.
- Liao, W.I., W.Y. Jean and **C.H. Loh**, “Seismic Design Assessment of Building Structures,” Proceedings of 1999 Workshop on Disaster Prevention / Management and Green Technology, Foster City, CA., June, 1999.
- K.H. Chen and **C.H. Loh**, “Simplified Inelastic Analysis of Bridge Pier Considering Isolation System,” Proceedings of 5th U.S. National Conf. On Lifeline Earthquake Engineering, Seattle, Aug. 1999.
- **Loh, C.H.**, W.Y. Jean, S.B. Chion, T.F. Wang, “Reliability — Based LRFD for Bridges : Consideration

of Seismic Load Factors, Proceedings of APSSRS'99, Feb. 1999, 215-226.

(1998)

- 羅俊雄、葉錦勳, “台灣震災評估及決策支援系統之研究”, 中國土木水利工程學會八十七年度會議論文集, Nov. 1998, pp.1~25.
- **Loh, C.H.** and T.S. Wu, “ Prediction of Site Effect from Earthquake Motion,” proceedings of International Conference on ESG 98, Yokohama, Japan, Dec. 1998.
- **Loh, C.H.** “ Researches Related to Seismic Hazard and Mitigation in Taiwan,” 1st Int. Symposium on New Development in the Earthquake Hazard Mitigation Technology for Moderate Seismic city Region, Seone, Korea, 1998, pp.20-31.
- **Loh, C.H.**, I.C. Chen and C.Y. Lin, “ System Identification of Frames Under Earthquake Loadings, “ Asia-Pacific Workshop on Seismic Design and Retrofit of Structures, Taipei, Taiwan, Aug. 10-12, 1998, pp.24-36.
- **Loh, C.H.**, P.Y. Lin, J.C. Wu and J.N. Yang, “ Experimental Virification of Static-Output-Feedback Control for a Seismic-Excited Full-Scale Building,” Proceedings of 2nd World Conference on Structural Control, Kyoto, June, 1998.
- **Loh, C.H.**, T.S. Wu and C.Y. Lin, “ Adaptive Indntification of Now inear Hysteretic Systems,” Proceedings of 2nd World Conference on Structural Control, Kyoto, June 1998.
- Chen, J.C., J. Lin and **C.H. Loh**, “ Recent Advances of Structural Control Researches in China and Taiwan,” Proceedings of 2nd World Conferences on Structural Control, Kyoto, June, 1998.
- **Loh, C.H.** and Z.K. Lee, “ System Identification of Vehicle-Bridge Interaction,” Taiwan-Canada Workshop on Bridge Structures, March 9-11, 1998, Taipei, Taiwan, 1998.
- **Loh, C.H.** and T.S. Wu, “ Seismic data Analysis From SMART C&D Array— Strong Motion Array of Canyon and Arch Dam,” Proceedings of 6th US National Conference on Earthquake Engineering, Seattle, May 1998.
- **Loh, C.H.** “ Seismic Hazard Mitigation Program in Taiwan “, Proceedings of Asia-Pacific Workshop on Research Coalition for Earthquake Hazard Management, MiKi, Hyogo, Japan. March 9 ~ 11, 1998.

(1997)

- **Loh, C.H.** “ Adaptive Identification of Nonlinear Hysteretic System,” Proceeding of 7th KAIST-NTU-KU-Trilateral Seminary Workshop on Civil Engineering, ROC. 1997.
- **Loh, C. H.** & Z. K. Lee, “Substructural Identification of Bridge— A FFT-based Spectral Analysis,” Proceedings of Structural Health Monitoring(editor : F.K. Chang),111~121. Sept. 1997.
- **Loh, C. H.** and T. S. Wu, “Dynamic Identification of Structures with Viscoelastic Dampers,” Will appear in ICOSSAR'97, Kyoto, Nov. 1997.
- **Loh, C. H.** and Y. S. Chen, “Effectiveness of Sliding Mode Control on Building Structure,” Will appear in ICOSSAR'97, Kyoto, Nov. 1997.
- **Loh, C.H.** and W.Y. Jean, :” Seismic Zoning on Groung Motions in Taiwan Area, “ Proceedings of discussion special technical session on earthquake geotechnical engineering during 4th Int. Conf. On Soil Mechanics and Foundation Eng., Hambrug/Germany/6-12 Sept., 1997, 71-79.
- Jean, W. Y. and **C. H. Loh**, “Seismic Demand for SDOF System— in relating to Seismic design.” Will appear in ICOSSAR'97, Kyoto, Nov. 1977.

- Wu, T. S., L. Y. Lu and **C. H. Loh**, “Dynamic Tests and Identification of Fei-Tsui Arch Dam,” Will appear in EASEC-6, Taipei, Jan. 1998.
- Lee, Z. K. and **C. H. Loh**, “Damage Detection for Bridge Structure from Seismic Response Data— Frequency Domain and Time Domain Approaches,” Will appear in EASEC-6, Taipei, Jan. 1998.
- **Loh, C. H.**, S. H. Hsieh, B.Y. Yang, S. T. Mau, “Development of Automatic MIMO System Identification Program to Analyze the Seismic Response Data from Taiwan Building.” 天氣分析與預報研討會，中華民國八十六年三月五日。(1997)
- Jean, W. Y., **C. H. Loh**, “Seismic Demand for SDOF System-in Relating to Seismic Design.” 天氣分析與預報研討會，中華民國八十六年三月五日。(1997)
- **Loh, C. H.**, Hwang, Y. and Hwang, C. S. “Comparison on the Seismic Demand Spectrum Using Seismic Data from Taipei Basin. 天氣分析與預報研討會，中華民國八十六年三月五日。(1997)
- **Loh, C. H.**, Lin, P. Y. and Chen, Y. S., “Structural Control Using Kalman Filter Approach,” Proceedings of 2nd Int. Workshop on Structural Control, Dec. 1996, pp. 282–298.
- **Loh, C. H.** and W. Y. Jean “Seismic Zoning on Ground motions in Taiwan Area,” ISSMFE on Earthquake Geotechnical Engineering, 1997.

(1996)

- **Loh, C. H.** and J. Y. Duh, “Frequency Domain and Time Domain Identification on Nonlinear Structural System,” Proceedings of 11 WCEE, Mexico, June, 1996.
- Mau, S. T. and **Loh, C. H.** “Quick past-earthquake Safety evaluation of buildings equipped with a new PC-based seismic recording system,” Proceedings of 11 WCEE, Special theme session : Earthquake Early Warning and Rapid Response, Mexico, June, 1996.
- **Loh, C. H.**, J. W. Hwang and T-C Shin, “Seismic Response Analysis of Taipei Basin,” Proceedings of 11 WCEE, Special Tneme Session: Effects of Surface Geology on Strong Ground Motion, Mexico, June, 1996.
- 李政寬、羅俊雄, “橋梁地震反應之系統識別—牛欄河橋”, 強地動觀測計劃研討會, 中央氣象局台北, 台灣, May, 1996.
- 黃正雄、羅俊雄、辛在勤, “台北盆地之地震反應分析— 994-6-5 地震及1995-6-25 地震”, 強地動觀測計劃研討會, 中央氣象局台北, 台灣, May, 1996.
- 吳子修、羅俊雄, “樓房結構之相關地震反應逆運算問題討論”強地動觀測計劃研討會, 中央氣象局台北, 台灣, May, 1996.
- **Loh, C. H.** and Z. K. Lee, “Evaluation of Abutment Stiffness in a 5-Span Contineous Bridge During Strong Ground Shaking," Proceedings of 3rd APCOM Conforence, Scone, Korea, p.1001-1006, Sebtember, 1996.
- **Loh, C. H.**, P. Y. Lin and Y. S. Chen, “Structural Control Using Kalman Filter Approach,” 2rd Int. Conf. on Structural COnTrol, HKUST, Hong Kong, December, 1996.
- 林沛暘、羅俊雄, “含扭轉效應下樓房結構地震反應之主動控制”, 中華民國第三屆結構工程研討會論文集, 1983~1992, 1996。
- **Loh, C. H.** and Z. K. Lee, “Evaluation of Abutment Stiffness in a 5-span Contineous Bridge During

Strong Ground Shaking,” Proceedings of APCOM, Seoul, Korea, Sept., 1996.

(1995)

- **Loh, C. H.**, “Structural Control with Active Variable Dampers,” Proceedings of The 5th KU-KAIST-NTU Trilateral Seminar/Workshop on Civil Engineering, Taipei, Taiwan, Nov., 153–158, 1995.
- **Loh, C.H.** and M.J. Ma, “Reliability Assessment of Structure Subjected to Horizontal - Vertical Random Earthquake Excitation,” Proceedings of APSSRA 95, Tokyo, Nov. 11–14, 188–195, 1995.
- Jean, W. Y., and **Loh, C. H.**, “Reliability Analysis of Steel Structures,” Proceedings of the EASEC-5 (Editor = Y.C.Loo), Austrcolin, Jaly, 1995, 2079 ~ 2084, 1995.
- **Loh, C. H.**, C. R. Cheng and Y. K. Wen, “Probabilistic Analysis of Deposit Liquefaction,” Proceedings of the 4th US Conference on Lifeline Earthquake Engineering (Editor:M.J. O'Rourke), San Francisco, August, pp.17~24, 1995.

(1994)

- **Loh, C. H.** and C. S. Yeh, “Earthquake Hazard Mitipation in Taiwan” Proceedings of the WSSI Vorkshop on Seismic Risk Management for Countries of the Asia Pacific Region, INCEDE Report 1994-02, 147-153, September 1994.
- **Loh, C. H.** etal., “Time Domain and Frequency Domain System Identification– Application to Earthquake Engineering,” 4th KAIST-NTU-KU Trilateral Seminar/Workshop on Civil Engineering, Kyoto, NOV. 1994.
- Kameda, H., **C. H. Loh** and M. Nakajima, “A Comparative Study of Seismic Hazard in Japan and Taiwan by MEans of Probabilistic Scenario Earthquake,” 4th KAIST-NTU-KU Tri-lateral Seminar/Workshop on Civil Engineering, Kyoto, NOV. 1994.
- **Loh, C. H.** and M. J. Ma, “Active-Damping and Active Stiffness Control for Seismic-Excited Building,” Proc. of 1st World Conference on Structural Control, Pasadena, August, 1994.
- **Loh, C. H.**, “Application of Structural Identification Approach to Detection of Structural Changes,” Proceedings of 4th ROC-US Disaster Prevention Seminar, Tainan, 50–70, May, 1994.
- **Loh, C. H.** and I-C. Tou, “A System identification approach to the detection of changes in structural parameters,” proceedings of 5th National Conf. on Earthquake Engineering, EERI, Vol.1, 209-218, July, Chicago, 1994.
- **Loh, C. H.**, W. Y. Wen, “Evaluation of Seismic Reliability of Steel Building, “ will appear in the proceedings of 2nd Int. Conf. on Computational Stochastic Mechanics, 629–637, Athens, Greece, June, 1994.

(1993)

- **Loh, C. H.**, “Seismic Hazard Analysis-Based on Strain Engineering Accumulation,” Proceedings of 3rd ROC and Japan Joint Seminar on Natural Hazard Mitipation, Tainan, 39–50, Nov., 1993.
- **Loh, C. H.** “Effects of foundation interaction on the identification of structural systems,” Proc. of SMIRT-12, Vol.K1, Aug. pp. 109–114, 1993.
- **Loh, C. H.** and W. Y. Jean, “Uncertainty Analysis in Seismic Hazard Analysis,” Proc. of ICOSSAR'93, Innsbruck, Aug. 1993.
- **Loh, C.H.** and W.Y. Chern, “Seismic Effectiveness of Active Tuned Mass Dampers for the Control of

Flexible Structure,” Proc. of Structural Congress XI, ASCE, Vol. I, Irvine, April, pp. 784–789, 1993.

- **Loh, C. H.** and Y. T. Yeh, “Seismic Hazard Analysis in Taiwan Region—Uncertainty Analysis,” 1993 National Earthquake Conference, Memphis, May, Vol. 1, pp. 143–152 1993.

(1992)

- Penzien, J., **Loh, C. H.** and Jean, W. Y., “Uniform-Hazard Response Spectra by An Alternativemethod,” Int. Symposium on Eathquake Disaster Reduction Technology, BRI, Tsukuba, Dec. 1992.
- Ku, B. D. and **C. H. Loh**, “comparative Study on Inelastic Design Response Spectrum,” The 1st National congress on Structural Engineering, Taiwan, Vol. I, pp. 365–374, 1992.
- Wu, T. S. and **C. H. Loh**, “Scattering of Plane SH Waves by a Canyon,” The 1st National Congress on Structural Engineering, TAIwan, Vol. II, pp. 393–402, 1992.
- **Loh, C. H.** and W. Y. Jean, “A New Methodology for Developing Uniform Hazard Response Spectrum,” The 2nd KU-KAIST-NTU Tri-lateral Seminar/workshop on Civil Engineering, Taipei, pp. 42–45, 1992.
- **Loh, C. H.** and C. S. Yeh, “Identification of Site Response Using 3-D Array Records,” Proceedings of 10WCEE, Spain, Vol. 1, pp. 259–263, 1992.
- C. S. Yeh, **C. H. Loh** and G. W. Su, “Results of Observation of Torsional Ground Motions and Response Analysis,” Proceedings of 10WCEE Spain, Vol. 2, pp. 635–639, 1992.

(1991)

- **Loh, C. H.** and W. Y. Jean, “Seismic Hazard Analysis in Taiwan: Uniform Risk Response Spectrum,” Proceedings of SMIRT-11 Conference, Vol. M, Tokyo, Japan, August, pp. 283–288, 1991.
- **Loh, C. H.** and W. Y. Jean, “Seismic Hazard Analysis of Buried Pipeline for Design,” 3rd US National Conference on Lifeline Earthquake Engineering, August, Los Angeles, 1991.
- **Loh, C. H.**, Y. T. Yeh and W. Y. Jean, “A Methodology for the Regional Zonation of Spectral Intensity,” 4th International Conference on Seismic Aonation, Stanford, August, 1991.
- **Loh, C. H.** and C. C. Kuo, “Deliability Analysis of Base-isolated Structure with Uncertain System Parameters,” Proceedings of 6th Int. Conf. on Applications of Statistics and Probability in Civil Engineering, June, 1991.
- **Loh, C. H.**, “Stochastic Response of Lifeline to Spatial Variation of Seismic Waves,” 2nd Int. Conf. on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, St. Louis, March 1991.

(1990)

- **Loh, C. H.** and C. C. Kuo, “Sensitivity Analysis and Identification on Base Isolated Structural System,” Proceedings of US National Workshop on Structural Control Research, October 25-26, pp. 163–167, 1990.
- **Loh, C. H.** and S-J. Chen, “Directionality in Spatial Variation of Earthquake Ground Motion,” 4th U.S. National Conference on Earthquake Engineering, EERI, May 1990.

(1989)

- **Loh, C. H.** and A. H-S. Ang, 1989.08, “Seismic Risk Analysis Based on Spectral Characteristics of Ground Motions,” Proceedings of ICOSSAR'89, San Francisco.
- **Loh, C. H.** 1989.08, “System Identification on LSST 1/4-Scale Soil-Structure Interaction Model,” SMIRT-10, Vol. K1, Los Angeles, August 1989.

- **Loh, C. H.** and A. H-S. Ang, 1989.08, “Stochastic Seismic Response Sensitivity of Lifeline Systems,” Proceedings of ICOSSAR'89, San Francisco.
- Yeh, Y. T. and **C. H. Loh**, 1989, 07, “Seismic Hazard Assessment in Taiwan,” Japan-China (Taipei) Joint Seminar on Natural Hazard Mitigation, DPRI, Kyoto, pp. 67–76.
- **Loh, C. H.**, 1989, 07, “Pipeline Response to Spatial Variation of Seismic Waves,” ASME/JSME Pressure Vessel and Piping Conference, Honolulu.
- **Loh, C. H.** and S. G. Lin, 1989, 07, “Spatial Variability of Seismic Waves: Its Engineering Application,” Japan-China (Taipei) Joint Seminar on Natural Hazard Mitigation, DPRI, Kyoto, pp. 101–110.
- **Loh, C. H.** and S. T. Mau, 1989.05, “Characteristics of a Structure-Foundation System,” ASCE, Structural Congress, Seismic Engineering: Research and Practice, pp. 209–216.

(1988)

- **Loh, C. H.**, 1988.12.7-9, “Spatial Variability of Seismic Waves and Its Engineering Application,” Proceeding, International Workshop on Spatial Variation of Earthquake Engineering, Dunwarke.
- **Loh, C. H.**, and C. L. Wu, 1988.08, “Stochastic Analysis of Spatial Variation of Seismic Waves,” Proceeding, 9WCEE, Tokyo, Japan, August 1988.
- **Loh, C. H.**, and Y. T. Yeh, 1988.08, “Characteristics of Strong Ground Motion of SMART-1 Arrat,” Proceeding, the IASBI/IAEE Joint Working Group of Effects of Surface Geology on Seismic Motion Second Workshop, Tokyo, Japan, pp. III-1-17.
- **Loh, C. H.**, Y. T. Yeh 1988.07, “Identification of Soil Structure Interaction System,” Proceeding, International Workshop on Seismic Design, American Nuclear Society, Taipei, pp. 93–109.
- **Loh, C. H.**, and C. L. Wu, 1988.07, “Stochastic Modellings of Strong Ground Motion,” Proceeding, International Workshop on Seismic Design, American Nuclear Society, Taipei, pp. 73–92.
- **Loh, C. H.** and W. D. Iwan, 1988.01, “Some Observations on the Variation of Earthquake Ground Motion Based on SMART-1 Array Data,” Proceeding, Second Workshop on Strong Motion Arrays, Taipei, Taiwan.
- **Loh, C. H.** and C. S. Yeh, 1988.01, “Development of Stochastic Ground Movement-Study on SMART-1 Array Data,” Proceeding, Second Workshop on Strong Motion Arrays, Taipei, Taiwan.
- **Loh, C. H.** and Y. T. Yeh, 1988.01, “Analysis of Seismic Differential Ground Movement by Using SMART-1 Array Data,” Proceeding, Second Workshop on Strong Motion Arrays, Taipei, Taiwan.
- **Loh, C. H.**, Y. T. Yeh, and S. C. Cheng, 1988.01, “Dynamic Characteristics of Lotung 1/4-Scale Nuclear Power Plant Containment Model,” Proceeding, Second Workshop on Strong Motion Arrays, Taipei, Taiwan.

(1987)

- **Loh, C. H.** and J. J. Pang, 1987.12, “Reliability Analysis of Offshore Structures,” Proceeding, the Eleventh National Conference on Theoretical and Applied Mechanics, Taipei, pp. 1083–1090.
- **C. H. Loh**, C. S. Yeh, C. S. Chen, 1987.08, Seismic Site-Response and Space-Time Characteristics of SMART-1 Data, Proceeding, the Pacific Rim Conference on Earthquake Engineering, New-Zealand, Vol.3, pp. 249–260.
- **C. H. Loh**, 1987.06, “Space-Time Variation of Strong Earthquake Ground Motion,” Proceeding, 3rd National Conference on Soil Dynamics and Earthquake Engineering, Princeton.

(1986)

- **C. H. Loh**, and G. W. Su, 1986.12, "Relative Ground Displacement and Space-Time Correlation of Ground Motions," Symposium of 7th Japan Earthquake Engineering Symposium, Tokyo, pp. 463–468.
- Chen C. H., **C. H. Loh** and C. L. Wu, 1986.12, "A Study of Earthquake Response Spectrum," Proceeding, Geophysics Research, National Central University, pp. 97–105.
- Tsai C. C., **C. H. Loh**, and Y. T. Yeh 1986.12, "Seismic Hazard Analysis and Risk Consistent Response Spectra of Taipei and Kaohsiung City," Proceeding, Geophysics Research, National Central University, Taiwan, pp. 107–115.
- **C. H. Loh**, G. W. Su, and Y. T. Yeh, 1986.12, "The Estimation of Ground Strain and Rotation for Engineering Analysis," Proceeding, Geophysics Research, National Central University, Taiwan, pp. 41–50.
- **C. H. Loh**, 1986.08, "Response of Multi-Supported Highway Bridges to Spatial Variation of Ground Motions, Proceeding, International Conference on Short and Medium Span Bridges, Ottawa, Canada. Vol. II, pp. 79.
- **C. H. Loh**, 1986.08, "Estimation of Spatial Correlation of Seismic Waves Using the SMART-1 Strong Motion Array Data," Proceeding, 3rd U.S. National Conference on Earthquake Engineering, South Carolina, pp.361–396.

(1985)

- **C. H. Loh**, 1985.11, "Analysis of Spatial Characteristics of Seismic Ground Motions—SMART-1 Array Data," Proceeding, ROC-US-JAPAN Trilateral Seminar-Workshop on Lifeline Earthquake Engineering, Taipei, Taiwan
- **C. H. Loh** and S. Z. Lee, 1985.11, "Response of Simple Structures to Spatial Variation of Ground Motions," Proc. ROC-US-JAPAN Trilateral Seminar-Workshop on Lifeline Earthquake Engineering, Taipei, Taiwan.
- **C. H. Loh**, 1985.11, "Spectral Analysis of Typhoon Wind Data and Its Effects on Structures," Proceeding, 5th U.S. National Conference on Wind Engineering Lubbock, Texas, pp. 1A33–1A40.
- **C. H. Loh**, 1985.5, "Reliability Analysis of Lifeline System with the Consideration of Spatial Variation of Ground Motions," 4th International Conference on Structural Safety and Reliability Kobe, Japan
- **C. H. Loh**, N. N. Chang and K. H. Chen, 1985.03, "Identification of Typhoon Wind Characteristics from Deployable Wind Measuring System," Proceeding, the ROC-JAPAN Joint Seminar on Multiple Hazards Mitigation, NTU, Taipei, R.O.C. pp. 885–903.
- **C. H. Loh** and C. C. Chern, 1985.03, "Comparison of Structural Response and Free-Field Seismic Waves in Earthquakes," Proceeding, the ROC-JAPAN Joint Seminar on Multiple Hazard Mitigation, NTU, Taipei, R.O.C., pp. 467–486.

(1984)

- **C. H. Loh**, and J. Penzien, 1984.07, "Identification of Wave Types, Directions and Velocities Using SMART-1 Strong Motion Array Data," Proceeding, 8WCEE, San Francisco.
- **C. H. Loh**, and H.Kameda, 1984.01, "Simulation of Spatial Variation of Nonstationary Seismic Waves," Proceeding of the CCNAA-AIT Seminar of the Research for Multiple Hazards Mitigation, Tainan, Taiwan.

(1983~)

- **C. H. Loh**, and S. T. Mau, 1980.09, “A Preliminary Study on a Multi-Variate System Identification Technique for Building Seismic Records, *Proceedings, the Seventh World Conference of Earthquake Engineering*, Vol. 6, Part IV, Turkey.
- **Loh, C.H.**, “A Study on Truss Optimization with Minimum Expected Cost Criteria,” *National Science Council Monthly*, Vol. IV, No. 6, pp. 2475–2493, June 1976. (in Chinese)
- Tang, J. P. and **Loh, C. H.**, “Monte Carlo Study of Structures Subjected to Two-Way Random Excitation Simultaneously,” *National Science Council Monthly*, Vol. III, No. 12, pp. 2001–2014 December 1975.(in Chinese)