

MARIA Q. FENG

618 S.W. Mudd, 500 West 120th St., New York, NY 10027, (212) 854-1182, mfeng@columbia.edu

Research Interest:

Multidisciplinary science and engineering in cyber-physical systems, advanced sensors, structural health monitoring, smart structures, system control, and hazard mitigation for civil infrastructure and military applications.

Academic Appointments:

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| 4/90-6/92 | Research Associate
Department of Civil Engineering and Operations Research
Princeton University |
| 6/92-12/11 | Assistant Professor, Associate Professor, Professor
Chancellor's Professor,
Department of Civil and Environmental Engineering
University of California, Irvine |
| 12/07-10/11 | Founding Director
Center for Advanced Monitoring and Damage Inspection
University of California, Irvine |
| 01/12-Present | Renwick Professor
Department of Civil Engineering and Engineering Mechanics
Director
Sensing, Monitoring, and Robotics Technology (SMaRT) Laboratory
Columbia University |
| 08/17-Present | Associate Director, NSF IUCRC Center for Energy Harvesting Materials and
Systems @ Columbia Site |

Education:

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| Ph.D. (2/92) | Mechanical Engineering
University of Tokyo, Japan |
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Selected Awards and Honors:

1. CAREER Award by National Science Foundation (NSF) (1995)
2. The Alfred Noble Prize jointly by American Society of Civil Engineers (ASCE) American Society of Mechanical Engineering(ASME), Institute of Electrical and Electronics Engineers (IEEE), American Institute of Mining, Metallurgical, and Petroleum Engineers (AIME), and Western Society of Engineers (WSE) (1995).
3. The Collingwood Prize by ASCE (1995)
4. Outstanding Achievement Award by Chinese Consulate General (1996)
5. Charles Pankow Finalist Award for Innovation by ASCE-CERF (1997)

6. Walter L. Huber Civil Engineering Research Prize for innovative, interdisciplinary and practical research on sensing, monitoring and controlling dynamic response of civil engineering system subjected to earthquake and wind loads, awarded by ASCE (1999)
7. Top Researcher on Wearable Sensors, by MIT Technology Review (2004)
8. Best Presentation Award by Society of Instrument and Control Engineers, Japan (2006)
9. Bridge Doctor, a special feature in Nightly News with Brian Williams, NBC (2007)
10. The Fariborz Maseeh Best Faculty Research Award by HSSoE, University of California, Irvine (2007)
11. Fellow, American Society of Civil Engineers (2008)
12. 20 Women to Watch, OC Metro Business Magazine (2008)
13. Best Paper Award, for “Robust Joint Torque Estimation and High-Speed Calibration for EMG Sensor Suits” published in *Transactions of Society of Instrument and Control Engineers* in 2006 by Society of Instrument and Control Engineers, Japan (2008)
14. Appointed Endowed Chair in Center for Diversity in Engineering Education by University of California, Irvine (2009)
15. Distinguished Mid-Career Faculty Award for Research by University of California, Irvine (2009)
16. Best Paper Award for the paper “Microwave Non-Destructive Evaluation of Corrosion in Reinforced Concrete Structures” that *Best Advances the State-of-the-Art in Antenna Measurements* by the 5th European Conference on Antennas and Propagation, Rome, Italy (2011)
17. Top 20 Civil Engineering Professors by Online Engineering Programs (2016)

Patents:

1. Method of Measuring Strain, 1996 (US Patent, No. 5,563,348)
2. Multiplexable Optical Fiber Accelerometer, Displacement, Strain, and Pressure Sensors, and Method of Operating the Same, 1999 (US Patent, No. 5,969,342)

Selected Recent Publications:

Book Chapters:

1. Feng, M.Q., Roqueta, G., and Jofre, L. (2013), “Microwave NDE for Inspection of FRP-Retrofitted Concrete”, *Non-Destructive Evaluation (NDE) of Polymer Matrix Composites: Techniques and Applications*, Woodhead Publishing Limited (Editor: Karbhari, V.).
2. Feng, Q. Gomez, H., Zampiere, A. (2012). “Chapter 10: Health Assessment of Highway Bridges Using Vibration-Based Response Data”, *Health Assessment of Engineered Structures: Buildings, Bridges and Other Infrastructures*, World Scientific Publishing Co., Inc. (Editor: Haldar, A.).

Refereed Journal Articles:

- A1. Yamafuji, K. and Feng, Q. (1987). “Study on the Postural Control of a Twin Cycle (Part 1) - Design and simulation of a Nonlinear Control System of an Inverted Pendulum Model”, *Journal of the Japan Society of Precision Engineering*, Vol. 53, No. 10, pp. 1622-1625.
- A2. Yamafuji, K. and Feng, Q. (1988). “Study on the Postural Control of a Twin Cycle (Part 2) - Experimental Results”, *Journal of the Japan Society of Precision Engineering*, Vol. 54, No. 9, pp. 1759-1764.
- A3. Feng, Q. and Yamafuji, K. (1988). “Design and Simulation of Control Systems of an Inverted Pendulum”, *Robotica*, Vol. 6, pp. 235-241.

- A4. Du, D. Z. and Feng, Q. (1991). "On Computational Geometry", *Journal of General Intelligence*, Vol. 630, pp. 54 -56.
- A5. Feng, Q. and Shinozuka, M. (1993). "Control of Seismic Response of Bridge Structures Using Variable Dampers", *Journal of Intelligent Material Systems and Structures*, Vol. 4, No. 1, pp. 117-122. Also selected for publication in *Advances in Intelligent Material Systems and Structures, Vol. 1. Advances in Vibration Control for Intelligent Structures*, Edited by Melvyn A. Kohudic, pp. 58-63.
- A6. Nagarajaiah, S., Feng, M. Q., and Shinozuka, M. (1993). "Analysis of Friction Controllable Sliding Isolation System", *Journal of Soil Dynamics and Earthquake Engineering*. Vol. 12, pp. 103-112.
- A7. Feng, M. Q. (1993). "Applications of a Hybrid Sliding Isolation System to Buildings", *Journal of Engineering Mechanics, ASCE*, Vol. 119, No. 10, pp. 2090-2108.
- A8. Feng, M. Q., Shinozuka, M. and Fujii, S., (1993). "A Friction Controllable Sliding Isolation System", *Journal of Engineering Mechanics, ASCE*, Vol. 119, No. 9, pp. 1845-1864.
- A9. Feng, M. Q. (1994). "Seismic Response Variability of Hybrid-Controlled Bridges", *Journal of Probabilistic Engineering Mechanics*, No. 9, pp. 195-201.
- A10. Feng, M. Q, Suzuki, H, and Yokoi, I (1995). "Development of Optical Sensing Systems for Smart Civil Infrastructure", *Journal of Smart Materials and Structures*, No. 4, Vol. 1995, pp. A114-A120.
- A11. Feng, M. Q. (1994). "An Optical Fiber Sensor for Measurement of Dynamic Structural Response", *Journal of Intelligent Material Systems and Structures*, Vol. 5, No. 6, pp. 847-853
- A12. Feng, M. Q. and Mita, A. (1995). "Vibration Control of Tall Buildings Using Mega-Sub Structures", *Journal of Engineering Mechanics, ASCE*, Vol. 121, No. 10, pp. 1082-1088.
- A13. Feng, M. Q. (1996). "An Experimental Study on an Electro-Optical Displacement Sensor", *Nondestructive Testing and Evaluation*, Vol. 13, pp. 5-14.
- A14. Suzuki, H. and Feng, M. Q. (1995). "Development of Optical Fiber Sensor", *Journal of Japan Society of Civil Engineering*, No. 528/VI-29, pp. 7-15.
- A15. Yamafuji, K., Ulyanov, S., and Feng, M. Q. (1995). "Research and Development of Intelligent Movable Robots for Service", *Journal of Research for Building Maintenance and Management*, Vol. 16, No. 5, pp. 26-32.
- A16. Chai, W. and Feng, M. Q. (1997). "Vibration Control of Super Tall Buildings Subjected to Wind Loads", *Journal of Nonlinear Mechanics*, Vol. 32, No. 4, pp. 657-668
- A17. Feng, M. Q. and Zhang, R. C. (1997). "Wind-Induced Vibration Characteristics of Nanjing TV Tower", *International Journal of Nonlinear Mechanics*. Vol. 32, No.14, pp. 693-706.
- A18. Ulyanov, S. V., Feng, M. Q. and Yamafuji, K, (1996). "Stochastic Analysis of Nonlinear Dynamic Systems with Random Structure - Part I: The Fokker-Pank-Kolmogorvov (FPK) Equation Approach", *Journal of Probabilistic Engineering Mechanics*, Vol. 13, No. 3, pp. 183-204.
- A19. Ulyanov, S. V., Feng, M. Q. and Yamafuji, K, (1996). "Stochastic Analysis of Nonlinear Dynamic Systems with Random Structure - Part II: Methods of Statistical Moments, Statistical Linearization and FPK Equation", *Journal of Probabilistic Engineering Mechanics*, Vol. 13, No. 3, pp. 205-226.
- A20. Feng, M. Q. and Chai, W. (1997). "Design of a Mega-Sub Controlled Building System under Stochastic Wind Loads", *Journal of Probabilistic Engineering Mechanics*, Vol. 12, No. 3, pp. 149-162
- A21. Feng, M. Q. (1998). "An Electro-Optical Accelerometer and Its Field Testing", *Journal of Engineering Mechanics, ASCE*, Vol. 124, No. 5, pp. 513-519..
- A22. Morikawa, H., Feng, M. Q., Takada, S., Katayama, K., and Sheng, L. H., (1996). "Material Performance of Existing Concrete Bridges in Seismic Area", *Construction Engineering Research*, No. 96-38-B, pp. 69-83.

- A23. Feng, M. Q., (1997). "Use of Energy Dissipating Systems for Improving Seismic Performance of Gavin Canyon Undercrossing", *Accepted for publication in ACI Structural Journal*.
- A24. Feng, M. Q. and Kim, J. M. (1998). "Identification of a Dynamic System Using Ambient Vibration Measurements", *Journal of Applied Mechanics, ASME*, Vol. 65, No. 2, pp. 1010-1023.
- A25. Feng, M. Q., Kim, J. M., Shinozuka, M., and Purasinghe, R. (2000). "Visco-Elastic Dampers at Expansion Joints for Seismic Protection of Bridges", *Journal of Bridge Engineering, ASCE*, Vol. 5, No.1, pp. 67-74.
- A26. Feng, M. Q. and Bahng, E. Y. (1999). "Damage Assessment of Jacketed RC Columns Using Vibration Tests", *Journal of Structural Engineering, ASCE*, Vol. 125, No. 3, pp. 265-271.
- A27. Feng, M. Q., Liu, C., He, X., and Shinozuka, M. (1999). "Electromagnetic Image Reconstruction for Damage Detection", *Journal of Engineering Mechanics, ASCE*, 126(7), 725-729
- A28. Kim, J. M, Feng, M. Q., and Shinozuka, M. (2000). "Energy Dissipating Restrainers for Highway Bridges", *Soil Dynamics and Earthquake Engineering*. 19 (2000), pp. 65-69
- A29. Feng, M. Q. and Bahng, E. Y. (1999). "Neural Network-Based Damage Identification of Bridge Substructures", *International Journal of Nonlinear Mechanics*
- A30. Shinozuka, M., Feng, M. Q. Lee, J., and T. Naganuma, (2000). "Statistical analysis of fragility curves", *Journal of Engineering Mechanics, ASCE*, 126(12), 1124-1131.
- A31. Shinozuka, M., Feng, M. Q., Kim, H. K., and Kim, S. H (2000). "Nonlinear static procedure for fragility curve development", *Journal of Engineering Mechanics, ASCE*, 126(12), 1287-1296.
- A32. Koyama, T., Feng, M. Q., Tanaka, T. (2000). "Wearable human assisting robot for nursing use", *Machine Intelligence and Robotic Control*, Vol.2, No.4, pp. 163-168
- A33. Koyama, T., Feng, M.Q., and Tanaka, T. (2000). "Development and motion control of a wearable human assisting robot for nursing use", *Human Friendly Mechatronics*, pp. 105-110.
- A34. Kim, S.H. and Feng, M. Q., (2003). "Fragility analysis of bridges under ground motion with spatial variation", *International Journal of Nonlinear Mechanics*, Vol. 38, No. 5, pp. 705-721.
- A35. Feng, M. Q., Kim, Y. J., and De Flaviis, F., (2001). "Use of microwaves for damage detection of FRP-wrapped concrete structures", *Journal of Engineering Mechanics, ASCE*, Vol. 128, No. 2, pp. 172-183.
- A36. Kim, Y. J., Jofre L., De Flaviis, F., and Feng, M. Q. (2003). "Microwave tomographic array for damage detection of civil engineering structures", *IEEE Transactions on Antennas and Propagation*, Vol. 51, No. 11.
- A37. Chen, Y. B. and Feng, M.Q., (2003). "Technique to improve the empirical mode decomposition in the Hilbert-Huang transform", *Journal of Earthquake Engineering and Engineering Vibration*, Vol. 2, No. 1, pp 75-86.
- A38. Kim, C. Y., Kim, D. S., Yi, J. H., Kim, N.S., Kwon, S.D., and Feng, M.Q, (2003). "Effect of vehicle weight on natural frequencies of bridges measured from traffic-induced vibration", *Journal of Earthquake Engineering and Engineering Vibration*, Vol. 2, No. 1, pp 109-116.
- A39. Kim, J. Y., Kim, D. K., Feng, M. Q., and F. Yazudani, (2004). "Applications of neural networks for estimation of concrete strength", *Journal of Materials in Civil Engineering, ASCE*, Vol. 16, No. 3, pp. 257-264.
- A40. Kim, Y. J., Jofre, L., De Flaviis, F., and Feng, M.F., (2004). "Microwave subsurface imaging technology for damage detection", *Journal of Engineering Mechanics, ASCE*, Vol.130, No. 7, pp. 858-866.
- A41. Feng, M. Q., Kim, D. K., Yi, J. H., and Chen, Y.B., (2003). "Baseline models for bridge performance monitoring", *Journal of Engineering Mechanics, ASCE*. Vol. 131, No. 5, pp. 562-569.
- A42. Yi, H.K, Yun, C.B., Feng, M.Q., (2003). "Model updating and joint damage assessment for steel frame structures using structural identification techniques", *International Journal of Steel Structure*, Vol. 2003, No. 3, pp. 83-94.

- A43. Haroun, M., Mossalam, A. S., Feng, M. Q., and H. Elsanadedy, (2003). "Experimental Investigation of Seismic Repair and Retrofit of Bridge Columns by Composite Jackets", *Journal of Journal of Reinforced Plastics and Composites*. Vol. 22, No. 14, pp. 1243-1268.
- A44. Chen Y., Feng M. Q. and Tan C-A (2006), "Modeling of Traffic Loads for System Identification of Bridge Structures." *Computer-Aided Civil and Infrastructure Engineering*, (21), pp. 57-66
- A45. Shinozuka, M., Liang, J. W., and Feng, M., (2006). "Use of SCADA for damage detection of water delivery systems", *Journal of Engineering Mechanics, ASCE*, Vol. 131, No. 3, pp. 225-230.
- A46. Murota, N. , Feng M. Q. and Liu, G.Y. (2006), "Earthquake Simulator Testing of Base-Isolated Power Transformers." *IEEE Transactions on Power Delivery*, Vol. 21, No. 3, pp. 1291-1299.
- A47. Feng M. Q., Kim, Y. J., and Park, K. (2006), "Real-Time and Hand-Held Microwave NDE Technology for Inspection of FRP-Wrapped Concrete Structures." *FRP International – The Official Newsletter of the International Institute for FRP in Construction*, Vol. 3, No. 2, pp. 2-5.
- A48. Feng M. Q. and Kim, D.H. (2006), "Novel Fiber Optic Accelerometer System Using Geometric Moire Fringe" *Sensors and Actuators, A: Physical*, Vol. 128, pp. 37-42.
- A49. Suzuki, Y., Tanaka, T., Feng M. Q, and Moromugi, S., (2006) "Robust Joint Torque Estimation and High-Speed Calibration for EMG Sensor Suits ", *Journal of Society of Instrument and Control Engineers*, Vol. 42, No. 8, pp. 982-990 (in Japanese).
- A50. Youseff, M., Feng M. Q. and Mossalam, A. (2007), "Stress-Strain Model for Concrete Confined by FRP Composites", *Journal of Composites, Part B: Engineering*, Vol. 38, No. 5-6, pp. 614-628.
- A51. Kim, D.H. and Feng M. Q. (2007), "Real-Time Structural Health Monitoring Using a Novel Fiber Optic Accelerometer System", *IEEE Sensors Journal*, Vol. 7, No. 4, pp. 536-543.
- A52. Tsutsui, Y., Tanaka, T., Kaneko, S., and Feng M. Q. (2007), "Joint Torque and Angle Estimation by Using Ultrasound Transmitted Through Human Muscle", *Journal of the Japan Society of Precision Engineering*, Vol. 73, No. 9, pp. 1062-1067. (in Japanese)
- A53. Chen, Y., Feng M. Q., Soyoz, S. (2008), "Large-Scale Shaking Table Test Verification of Bridge Condition Assessment Methods" *ASCE Journal of Structural Engineering*, Vol. 134, No. 7., pp. 1235-1245.o
- A54. Feng M. Q., (2007), "Recent Advances in Structural Health Monitoring" *Journal of the Korean Society for Nondestructive Testing*, Vol. 27, No. 6, pp. 483-500
- A55. Soyoz, S., and Feng M.Q. (2008) "Instantaneous Damage Detection of Bridge Structures and Experimental Verification", *Journal of Structural Control and Health Monitoring*. Vol 15 No 7 pp 958-973.
- A56. Lee, S., Feng, M., Hong, S. H., and Chung, Y.S. (2008), "Long-Term Monitoring and Analysis of a Curved Concrete Box-Girder Bridge", *International Journal of Concrete Structures and Materials*, Vol. 2, No. 2, pp. 91-98.
- A57. Soyoz, S., and Feng M.Q. (2009) "Long-Term Monitoring and Identification of Bridge Structural Parameters", *Computer-Aided Civil and Infrastructure Engineering*, Vol. 24, pp.82-92.
- A58. Na, U.J., Park, T.W., Feng M. Q., and Chung, L (2008), "Neuro-Fuzzy Application for Concrete Strength Prediction using Combined Non-Destructive Tests", *Magazine of Concrete Research*, Vol. 61, No. 4, pp. 245-256.
- A59. Kwon, S.J., Na, U.J., and Feng M. Q. (2008), "A Study on Electromagnetic Properties on OPC Mortar with Different Chloride Contents", *Journal of Korean Society of Civil Engineers*, Vol. 28, No. 4A, pp. 565-571 (in Korean)
- A60. Kwon, S.J., Song, H.W., and Feng M. Q. (2008), "An Experimental Study on Electromagnetic Properties in Early Aged Cement Mortar under Different Curing Conditions", *Journal of Korean Society of Civil Engineers*, Vol. 29, No. aA, pp. 737-746 (in Korean)

- A61 Park, T.W., Na, U.J., Chung, L., and Feng, M.Q., (2008), “Compressive Behavior of Concrete Cylinders Confined by Narrow Strips of CFRP with Spacing”, *Journal of Composites, Part B: Engineering*, Vol. 39, No. 7-B, pp. 1093-1103.
- A62 Frizzarin, M., Feng, M.Q., Franchetti, P., Soyoz, S., Modena, C. (2010), “Damage detection based on damping analysis of ambient vibration data”, *Journal of Structural Control and Health Monitoring*, Vol. 17, No. 4, pp. 368-385.
- A63 Chen, Y., Feng, M.Q., and Tan, C.A. (2009) “Bridge Structural Condition Assessment Based on Vibration and Traffic Monitoring” *Journal of Engineering Mechanics*, Vol. 135, No. 8, pp. 747-758.
- A64 Yi, J., Kim, D.K., and Feng, M.Q. (2009), “Periodic seismic performance evaluation of highway bridges using structural health monitoring system”, *Structural Engineering and Mechanics*, Vol. 31, No. 5, pp. 527-544.
- A65 Yamafuji, K., Feng, M.Q., and Kawamura, T. (2008), “Robot Driven by Parallel Bicycles”, *International Journal of Mechanics and Control*, Vol. 09, No. 2, pp.3-11.
- A66 Feng, M.Q. (2009), “Application of Structural Health Monitoring in Civil Infrastructure”, *Smart Structures and Systems*, Vol. 05, No. 4, pp. 469-482.
- A67 Franchetti, P., Modena, C., and Feng, M.Q. (2009), “Nonlinear Damping Identification in Precast Prestressed Reinforced Concrete Beam”, *Computer-Aided Civil and Infrastructure Engineering*, Vol. 24, pp. 577-592.
- A68 Tsutsui, Y., Tanaka, T., Kaneko, S., Sakata, Y., and Feng, M.Q., (2009), “Human Joint Motion Recognition Using Ultrasound Pulse Echo Based on Test Feature Classifier”, *Journal of Robotics and Mechatronics*, Vol. 21, No.5, pp.597-606.
- A69 Kwon, S.J., Feng M. Q., Park, T.W., and Na, U.J., (2009), “An Experimental Study on Evaluation of Compressive Strength in Cement Mortar Using Averaged Electromagnetic Properties”, *International Journal of Concrete Structures and Materials*, Vol. 3, No. 1, pp. 25-32
- A70 Chen, Y. and Feng, (2009) “Structural Health Monitoring by Recursive Bayesian Filtering” *Journal of Engineering Mechanics*, Vol. 135, No. 4, pp. 231-242.
- A71 Kwon, S.J., Feng M. Q., and Park, S.S. (2009), “Characterization of Electromagnetic Properties for Durability Performance and Saturation in Hardened Cement Mortar, *NDT&E International*, Vol. 43, No. 2, pp. 86-95.
- A72 Zanaica, L, Kim, D.H., Crendene, M., Feng, M.Q., and Modena, C., (2009) “dinamici con una nuova generazione di accelerometri”. *Ingegneria Ferroviaria*, Vol. LXIV, No. 6, pp. 565-586 (in Italian).
- A73. Kwon, S.J., Feng, M.Q., and Na, U.J. (2009) “An experimental study on characteristic of averaged electromagnetic properties considering moisture changes in cement mortar:”. *Journal of the Korean Concrete Institute*, Vol. 21, No. 2, pp. 199-207.
- A74 Fukuda, Y., Feng, M.Q., and Shinozuka, M. (2010) “Cost-Effective Vision-Based System for Monitoring Dynamic Response of Civil Engineering Structures”. *Journal of Structural Control and Health Monitoring*, Vol. 17, No. 8, pp. 918-936
- A75 Soyoz S., Feng M.Q. and Shinozuka M. (2010) “Structural Reliability Estimation with Vibration-Based Identified Parameters”, *Journal of Engineering Mechanics, ASCE*, 136 (1), 100-106.
- A76 Kwon, S.J. and Feng, M.Q. (2010) “An experimental study for characteristics evaluation of cement mortar using infrared thermography technique:”. *Journal of Korean Society of Civil Engineers*, Vol. 30, No. 1A, pp. 1-7.
- A77 Feng, M.Q., Zou, L., Imai, M. (2010) “Detection of Ceramic Cracks Using a Distributed High-Resolution Brillouin Fiber Optic Sensor. *SICE Journal of Control, Measurement, and System Integration*, Vol. 3, No. 4, pp. 279-284.

- A78 Lee, S., Feng, M.Q., and Kwon, S.J. (2010) “Concrete Mixture Design for RC Structures under Carbonation – Application of Genetic Algorithm Technique to Mixture Conditions:”. *Journal of the Korean Concrete Institute*, Vol. 22, No. 3, pp. 335-343.
- A79 Lee, S., Feng, M.Q., and Hong, S.H. (2011) “Equivalent Modal Damping of Short-Span Bridges Subjected to Strong Motion”. *Journal of Bridge Engineering, ASCE*, Vol.16, No. 2.
- A80 Gomez, H., Fanning, P.J., Feng, M.Q., and Lee, S. (2011), “Long-Term Monitoring of a Curved Concrete Box Girder Bridge”, *Engineering Structures*, Vol. 33, pp. 2861-2869.
- A81 Ulusoy, H., Feng, M.Q., and Fanning, P. (2012), “System Identification of a Building from Multiple Seismic Records”, *Earthquake Engineering and Structural Dynamics*, Vol. 40, No. 6, pp. 661-674.
- A82 Roqueta, G., Jofre, L., and Feng, M.Q., (2012), “Analysis of the Electromagnetic Signature of Reinforced Concrete Structures for Nondestructive Evaluation of Corrosion Damage”, *IEEE Transactions on Instrumentation & Measurement* , Vol. 40, No. 6, pp. 661-674.
- A83 Yi, J.H., Kim D., Go, S. Kim, J.T., Park, J.H., Feng, M.Q., and Kang, K.S. (2012), “Application of Structural Health Monitoring System for Reliable Seismic Performance Evaluation of Infrastructures”, *Advances in Structural Engineering* , Vol. 15, No. 6, pp. 955-967.
- A84. Baek. S., Xue, W. Feng, M. Q. Kwon, S., (2012). “Nondestructive Corrosion Detection on RC structure.” *Journal of Nondestructive Evaluation*, vol.31, no.2, pp.181-190
- A85. Torbal, M., Gomez, H. and Feng, M.Q. (2013), “Fragility Analysis of Highway Bridges Based on Long-Term Monitoring Data”, *J. of Computer-Aided Civil and Infrastructure Engineering*, Vol. 28, Issue. 3, pp. 178-192.
- A86. Gomez, Hasan S. Ulusoy, Feng, M.Q. (2012), “Variation of modal parameters of a highway bridge extracted from six earthquake records”, *Earthquake Engineering and Structural Dynamics*, Published online on July 18, 2012
- A87. Gomez, Hasan S. Ulusoy, Feng, M.Q. (2013), “Variation of modal parameters of a highway bridge extracted from six earthquake records”, *Earthquake Engineering and Structural Dynamics*, Vol. 42, No. 4, pp.565-579.
- A88. Fukuda, Y., Feng, M.Q., Narita, Y., Kaneko, S., and Tanaka, T. (2013), “Vision-based displacement sensors for monitoring dynamic response using robust object search algorithm”, *IEEE Sensors Journal*, Vol. 13, No. 12, pp.4725-4732.
- A89. Li, J. H., Li, A.Q., and Feng, M.Q., (2013), “Sensitivity and Reliability Analysis of Self-Anchored Suspension Bridge”, *Journal of Bridge Engineering, ASCE*. Vol. 18, No. 8, pp. 703-711.
- A90. Feng, M.Q., Kawamura, T., Tanaka, T. (2013), “Parallel bicycles and their applications”, *Journal of Robotics and Mechatronics*, Vol. 26, No. 1, pp.9-14.
- A91. Ozer, E., Feng, M.Q., and Soyoz, S. (2014), “SHM-integrated bridge reliability estimation using multivariate stochastic processes”, *Earthquake Engineering and Structural Dynamics*, Vol. 44, No. 4, pp. 601-618. DOI: 10.1002/eqe.2527.
- A92. Feng, M., Fukuda, Y., Mizuta, M., and Ozer, E. (2015). “Citizen Sensors for SHM: Use of Accelerometer Data from Smartphones”. *Sensors*, 15(2), 2980-2998.
- A93. Feng, D. M. and Feng, M.Q. (2015). “Model updating of railway bridge using in-situ dynamic displacement measurement under trainloads”. *Journal of Bridge Engineering*; doi:10.1061/(ASCE)BE.1943-5592.0000765.
- A94. Feng, M.Q., Fukuda, Y., Feng, D.M., and Mizuta, M. (2015), “Non-target vision sensor for remote measurement of bridge dynamic response”. *Journal of Bridge Engineering*; doi:10.1061/(ASCE)BE.1943-5592.0000747.
- A95. Lee, Y.J., Feng, M.Q., Lee, E.T. (2014), “Detection of buried prestressed concrete cylinder pipe with soil-pipe interaction”. *Structural Control and Health Monitoring*, 18(7), pp. 2191-2195.

- A96. Feng, D.M. and Feng, M.Q. (2016), "Output-only damage detection using vehicle-induced displacement response and mode shape curvature index". *Structural Control and Health Monitoring*, doi:10.1002/stc.1829.
- A97. Feng, D.M., Sun, H., and Feng, M.Q. (2015). "Simultaneous identification of bridge structural parameters and vehicle loads". *Computers & Structures*, 57: 76-88..
- A98. Feng, M.Q., Fukuda, Y., Mizuta, M., & Ozer, E. (2015). "Citizen Sensors for SHM: Use of Accelerometer Data from Smartphones". *Sensors*, 15(2), 2980-2998.
- A99. Feng, D.M. and Feng, M.Q. (2015), Vision-based multi-point displacement measurement for structural health monitoring. *Structural Control and Health Monitoring*. doi:10.1002/stc.1819
- A100. Feng, D.M., Feng, M.Q. Ozer, E., and Fukuda, Y. (2015), "A vision-based sensor for noncontact structural displacement measurement". *Sensors* 2015, 15, 16557
- A101. Ozer, E., Feng, M.Q., and Feng, D.M. (2015), Citizen sensors for SHM: Towards a crowdsourcing platform. *Sensors*, 15, 14591.]
- A102. Sun, H. Feng, D. M.; Liu, Y.; Feng, M.Q. (2015) Statistical regularization for identification of structural parameters and external loadings using state space models. *Computer Aided Infrastructure and Civil Engineering*; 30: 843-858.
- A103. Fukuda, Y., Feng, M.Q., Zheng, J., and Halls, V. (2016), "Rapid Detection of IED Light Emission Patterns for Activating a Head Protective System", *IEEE Sensors Journal*, Vol, 16, Issue 2, pp, 498-50
- A104. Sabato, A. and Feng, M.Q. (2014). "Feasibility of frequency-modulated wireless transmission for a multi-purpose MEMS-based accelerometer", *Sensors*, 14.9, pp.16563-16585.
- A105. Feng, D.M. and Feng, M.Q. (2015), "Model updating of railway bridge using in situ dynamic displacement measurement under trainloads". *Journal of Bridge Engineering*, 20(12), 04015019.
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