

Said Elkhoully, Ph.D

Contact Information

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University Education and Academic Achievements

Ph.D. (October 2004) in Structural Engineering, Faculty of Engineering, The University of Tokyo, Japan

Dissertation: *Improved Applied Element Method for Numerical Simulation of Structural Failure and Collapse*

M.Sc. (September 2001) in Structural Engineering, Department of Civil Engineering, Cairo University, Fayoum Branch, Egypt

Thesis: *Seismic Behavior of Cable Stayed Bridges for Different Ground Motion Characteristics*

B.Sc., Honours, (May 1997) in Civil Engineering, Cairo University, Fayoum Branch, Egypt

Academic Experience

- Assistant Professor, UAE University, UAE, (2014-Present).
- Visiting Professor, UAE University, UAE, (2010-2014).
- Associate Professor of Structural Engineering, Fayoum University, Egypt, (on leave), (2011-Present).
- Assistant Professor, Fayoum University, Egypt, (2006-2011), full time.
- Research Assistant, Postdoctoral Fellow, Tokyo University, Japan, (2004-2005).
- PhD Research Student, Tokyo University, Japan, (2001-2004), full time.
- Assistant Lecturer/Teaching Assistant, Cairo University (Fayoum Branch), Egypt, (1997-2001), full time.

Non-Academic Experience

- Hamza Associates, Cairo, Egypt, Group Leader of the Civil Engineering Department, Structural design, technical assistance and consulting, (2007-2010), part time.
- Softoria Company, Cairo, Egypt, Technical Manager, Developing state-of-the-art software for the conduct of all design and workshop drawings of telecommunication towers, (2006-2007), part time.
- Structural Engineer Group, Egypt, Structural Engineer, Structural design of reinforced concrete offices and buildings, (1998-2001), part time.
- Hamza Associates, Cairo, Egypt, Structural Engineer, Structural design of high-rise buildings, (1997-1998), part time.

Research Interests

- Abnormal loads and progressive collapse
- Structural vulnerability assessment and risk mitigation

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- Performance-based earthquake engineering of structural and nonstructural components
 - Liquid-soil-structure interaction
 - Rehabilitation and seismic retrofitting

Current membership in Professional Organizations

- Member of the Egyptian Engineering Syndicate (EES)
- Member of the Egyptian Society of Earthquake Engineering (ESEE)
- Member of the Egyptian Tunneling Society (ETS)
- Member of the Japan Society of Civil Engineers (JSCE)

Service Activities

- Member of the editorial board of Frontiers in Geotechnical Engineering (FGE).
- Refereeing in Journal of Advanced Research, Elsevier.
- Refereeing in Arabian Journal of Science and Engineering, Springer.
- Refereeing in The Structural Design of Tall and Special Buildings, Wiley.
- Master and PhD theses supervision (7 master students and 3 PhD students).
- External examiner for two master theses and one PhD thesis.

Academic Honors and Awards

- Outstanding Graduate Student Instructor Award based on faculty and student evaluations, Civil Engineering Department, Fayoum University, Egypt (2008).
- The Excellence Presentation Award at the 7th International Summer Symposium of the Japan Society of Civil Engineering (2005).
- Best Paper Award received from the Japan Society of Civil Engineering (JSCE) (2005).
- Post-Doctoral Fellowship for a period of one year (Oct 2004-Oct 2005) at the Department of Civil Engineering, The University of Tokyo, Japan.
- PhD Scholarship by the Japanese Government (Monbukagakusho) (Oct 2001-Sep 2004) at the Department of Civil Engineering, The University of Tokyo, Japan.
- Graduate Fellowship, Cairo University (Fayoum Branch) University, Cairo, Egypt, 1998–2001
- Undergraduate Distinction Awards, Cairo University (Fayoum Branch), Fayoum, Egypt, 1992–1997.
- Best BSc Graduation Project, Cairo University, Fayoum Branch, Egypt (1997).

Publications

International Journals and Bulletins

1. **Elkholi, S.**, and El-Ariss, B. "Progressive Collapse Evaluation of Externally Mitigated Reinforced Concrete Beams", *Engineering Failure Analysis*, 40, 2014, 33–47 (**Impact Factor: 1.13**)
2. **Elkholi, S.**, Elsayed, A., El-Ariss, B. and Sadek, S. "Optimal Finite Element Modeling for Modal Analysis of Liquid Storage Circular Tanks", *International Journal of Structural Engineering*, 2014, 5(3), 207–241.
3. Fahim, M. **Elkholi, S.** and Morad, S. "Efficient New Numerical Technique for RC Structures with Construction Defects under Monotonic and Cyclic Loading Conditions", *Asian Transactions on Engineering ATE*, Volume 02 Issue 06, ISSN: 2221-4267, 2013.

4. Fahim, M., **Elkholy, S.** and Morad, S. "Sensitivity Analysis of the Honeycomb Effects on Ultimate Behavior of RC Columns", *Research Magazine, El-Azhar University*, 35(1). 117-131, 2013
5. **Elkholy, S.**, Gomaa, M., and Akl, A. A. "Improved Applied Element Simulation of RC and Composite Structures under Extreme Loading Conditions," *Arabian Journal for Science and Engineering*, June 2012, Volume 37, Issue 4, PP. 921-933. (Impact Factor; 0.385)
6. **Elkholy, S.**, ElAssaly, M. Maher, M. "Seismic Vulnerability Assessment of Existing Multi-Story Reinforced Concrete Buildings in Egypt," *Arabian Journal for Science and Engineering*, Volume 37, Issue 2, Page 341-355, 2012. (Impact Factor; 0.385)
7. **Elkholy, S.** and Galal, S. "A Study on the Effect of Non-uniform Tire Inflation Pressure Distribution on Rigid Pavement Responses," *International Journal of Pavement Engineering*, Volume 13, Issue 3, PP. 244-258, 2012 (Impact Factor: 0.745).
8. Galal, S. and **Elkholy, S.** "Ultimate Behavior of Rigid Pavements under Different Soil Erosion Scenarios using FE Approach," *Journal of Engineering and Applied Science*, Faculty of Engineering, Cairo University, Volume 57, No. 6, PP. 471-490, Dec 2010.
9. Galal, S. and **Elkholy, S.** "Modeling Effects of Tire Inflation Pressure on Rigid Pavement Responses," *Research Magazine, El-Azhar University*, Volume 4, No.10, PP. 23-41, 2009.
10. **Elkholy, S.** and Morsy, U. "Non-Linear Push-Over Analysis of Multi-Story Steel Structures Subjected to Extreme Ground Motions," *Port Said Engineering Research Journal (PSERJ)*, Faculty of Engineering, Suez Canal University, Volume 12, No. 1, 2008.
11. ***Elkholy, S.** and Meguro, K. "Numerical Study of Collapse Behavior of Steel Buildings due to Extremely High Seismic Load," *JSCE Journal of Earthquake Engineering*, Volume 28, 2005
- ***Elkholy, S.** and Meguro, K. "Simulation of Seismic Damage to Steel Buildings," *Bulletin of Earthquake Resistant Structure Research Center*, Institute of Industrial Science, University of Tokyo, Volume 38, PP. 145-153, Mar 2005.
12. *Meguro, K. and **Elkholy, S.** "Microtremor Measurements for the Estimation of Seismic Response in Boumerdes Algeria," *Bulletin of Earthquake Resistant Structure Research Center*, Institute of Industrial Science, University of Tokyo, Volume 37, PP. 83-93, Mar 2004.
13. ***Elkholy, S.** and Meguro, K. "Numerical Modeling of the Progressive Collapse of Framed Structure by using Improved Applied Element Method," *Bulletin of Earthquake Resistant Structure Research Center*, Institute of Industrial Science, The University of Tokyo, Volume 36, PP.156-167, Mar 2003.

Technical Reports

14. Hamada, M., Goto, Y., Tazo, T., Meguro, K., Miyajima, M., Konagai, K., Takeuchi, M., Ono, Yusuke, Yoshida, M., Ramdane, K, Ashour, N. and **Elkholy, S.** "The Boumerdes Earthquake, 21st May 2003," Japanese Reconnaissance Team, Japan Association of Earthquake Engineering, Japan Society of Civil Engineers, *Architectural Institute of Japan and Japan Geotechnical Engineering Society*, 2004.

International Conferences and Symposiums

15. **Elkholy, S.** and Mwafy, A. "Vulnerability and Cost Assessment of Seismically Strengthened RC Buildings," *The First Australasia and South-East Asia Structural Engineering and Construction Conference*, Perth, Australia, 2012
16. Mwafy, A. and **Elkholy, S.** "Comparative Vulnerability Assessment of Pre-Code Structures," *15th World Conference on Earthquake Engineering, WCEE15*, Lisboan, 2012.

17. **Elkholy, S.**, ElAssaly, Gomaa, M., and Mokhtar, U. "Seismic Assessment of Retrofitted RC Structures using Tradional and New Repair Techniques," *15th World Conference on Earthquake Engineering, WCEE15*, Lisboa, 2012.
18. **Elkholy, S.** "Seismic Vulnerability of a Mamluk Style Minaret," *SMAR 2011 Dubai First Middle East Conference on Smart Monitoring, Assessment and Rehabilitation of Civil Structures*, Feb 2011.
19. **Elkholy, S.**, Gomaa, M. and Akl, A. A. "Collapse Analysis of R/C Structures Using Improved Applied Element Method," *Proceedings of the 9th International Symposium on New Technologies for Urban Safety of Mega Cities in Asia*, Kobe, Japan, Oct 2010.
20. **Elkholy, S.** "Seismic Vulnerability of a Mamluk Style Minaret," *The Workshop Structural Engineering: Problems and Solutions*, 17-18 Oct 2010.
21. El-Assaly, M., **Elkholy, S.** and Maher, M. "Seismic Damage Assessment Of Vertical Irregular RC Buildings: Case Study Of Setback Buildings," *The 10th International Conference on Recent Advances in Structural Dynamics, RASD2010*, Southampton University, United Kingdom, 12-14 Jul 2010.
22. **Elkholy, S.**, Gomaa, M. and Akl, A. A. "New Methodology for Collapse Analysis of Multi-Story RC Structures," *American Society of Civil Engineers (ASCE), 6th International Engineering and Construction Conference*, Cairo, Egypt, Jun 2010.
23. **Elkholy, S.** and Galal, S, "The AASHTO Procedure Versus a New Proposed Technique for Investigating the Soil Erosion Effect on Rigid Pavements Behavior," *American Society of Civil Engineers (ASCE), 6th International Engineering and Construction Conference*, Cairo, Egypt, Jun 2010.
24. Maher, M., **Elkholy, S.**, and El-Assaly, M. "The Effects of Ground Motion Characteristics on the Seismic Fragility Curves of R/C Buildings," *CSCE 2009 Annual General Conference*, St. John's, Newfoundland and Labrador, Canada, 2009.
25. **Elkholy, S.**, El-Assaly, M.M., and Maher, M. "Seismic Vulnerability Assessment of Existing Multi-Story Reinforced Concrete Buildings in Egypt," *11th Arab Structural Engineering Conference (11th ASEC)*, Saudi Arabia, 25-27 Oct 2009.
26. El-Said, M., **Elkholy, S.**, Morsy, U. and Shaheen, A. "Modal Analyses of Vertical Irregular Multi-Story Steel Structures," *Proceedings of the 37th edition of the CSCE Annual Conference*, Quebec, Canada, 2008.
27. **Elkholy, S.** and Morsy, U. "Non-Linear Push-Over Analysis of Multi-story Steel Structures Subjected to Extreme Ground Motions," *Proceedings of the First European Conference on Earthquake Engineering and Seismology*, Geneva, Switzerland, Paper No. 1430, Sep 2006.
28. ***Elkholy, S.** and Meguro, K. "Numerical Vulnerability Assessment of Multi-Story Steel Structures Subjected to Extreme Ground Motions," *Proceedings. of the 5th STESSA Conference*, Japan, 2006.
29. ***Elkholy, S.** and Meguro, K. "Advanced Numerical Approach to Simulate the Structural Behavior of Steel-framed Buildings in Fire," *Proceedings. of the 7th International Summer Symposium (JSCE)*, PP. 65-68, Tokyo, Japan, Jul 2005 (Best Paper Award).
30. ***Elkholy, S.** and Meguro, K. "Modeling of Steel Structures in Fire Conditions Using IAEM," *Proceedings. of the 60th Annual Meeting of JSCE*, Tokyo, Japan, Sep 2005.

31. ***Elkholly, S.** and Meguro, K. "Numerical Simulation of High-rise Steel Buildings using Improved Applied Element Method," *13th World Conference on Earthquake Engineering*, Vancouver, B.C., Canada, Paper No. 930, 1-6 Aug 2004.
32. ***Elkholly, S.** and Meguro, K. "Numerical Modeling of Steel Structures in Fire Conditions using Improved Applied Element Method," *Proceedings of the 3rd International Symposium on New Technologies for Urban Safety of Mega Cities in Asia*, Kanpur, India, Oct 2004.
33. ***Elkholly, S.** and Meguro, K. "Collapse Simulation of Multi-story Frame Structures under Severe Ground Motions," *Proceedings of the 6th International Summer Symposium (JSCE)*, Tokyo, Japan, Jul 2004.
34. ***Elkholly, S.** and Meguro, K. "Modeling the Seismic Behavior of Steel Structures," *Proceedings of the 3rd Annual Meeting of Japan Association for Earthquake Engineering (JAE)*, Tokyo, Japan, PP. 450-451, 2004.
35. ***Elkholly, S.** and Meguro, K. "Collapse of Multi-story Steel Buildings under Severe Ground Motions," *Proceedings of the 59th JSCE Annual Meeting*, Japan, Sep 2004.
36. ***Elkholly, S.**, Tagel-Din, H. and Meguro, K. "Structural Failure Simulation due to Fire by Applied Element Method," JCROSSAR 2003, *The Fifth Japan Conference on Structural Safety and Reliability*, Tokyo, Japan, Nov 2003.
37. ***Elkholly, S.** and Meguro, K. "Dynamic Progressive Collapse of High-Rise Buildings," *Proceedings of the 2nd International Symposium on New Technologies for Urban Safety of Mega Cities in Asia*, Tokyo, Japan, Oct 2003.
38. ***Elkholly, S.** and Meguro, K. "A Study on Progressive Failure Analysis of High-Rise Steel Buildings Using Improved Applied Element Method," *Proceedings of the 58th JSCE Annual Meeting*, Japan, Sep 2003.
39. ***Elkholly, S.** and Meguro, K. "Progressive Failure Analysis of High-rise Steel Buildings," *Second Korea-Japan Workshop on New Direction for Enhancement of Structural Performance*, Aug 2003.
40. ***Elkholly, S.** and Meguro, K. "Progressive Failure Analysis of High-rise Steel Buildings," *Proceedings of the 5th International Summer Symposium (JSCE)*, Tokyo, Japan, 53-56, Jul 2003.
41. ***El-Ghazaly, H.A., Selim, S.S., El-Assaly, M.M., and Elkholly, S.** "Seismic Behavior of Suez Canal Cable-Stayed Bridge," *Proceedings of the 3rd Regional Conference on Civil Engineering Technology*, ASCE Egypt Section, Cairo, Egypt, Apr 2002.
42. ***El-Ghazaly, H.A., Selim, S.S., El-Assaly, M.M., and Elkholly, S.** "Effect of Earthquake Frequency Content on the Seismic Behavior of Cable-Stayed Bridges," *Proceedings of the 3rd Regional Conference on Civil Engineering Technology*, ASCE Egypt Section, Cairo, Egypt, Apr 2002.
43. ***El-Ghazaly, H.A., Selim, S.S., El-Assaly, M.M., and Elkholly, S.** "A Study on the Classification on Earthquake Ground Motions," *Proceedings of the 3rd Regional Conference on Civil Engineering Technology*, ASCE Egypt Section, Cairo, Egypt, Apr 2002.

Other Publications

44. ***Elkholly, S.** "Seismic Behavior of Cable-stayed Bridges for Different Ground Motion Characteristics," *Master Thesis, Department of Civil Engineering, Cairo University* (Fayoum Branch), Egypt, 2001.
45. ***Elkholly, S.** "Improved Applied Element Method for Numerical Simulation of Structural Failure and Collapse," *PhD Dissertation, Department of Civil Engineering, Tokyo University*, Japan, 2004.