

CURRICULUM VITAE

Dr. Abbas Moustafa
Ph. D., M. Sc., B. Sc.
Associate Professor



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Personal Information:

Full Name: Abbas Mohamed Abbas Moustafa
Occupation: Associate Professor, Dept. of Civil Eng., Minia University, Minia 61111, Egypt
Specialty: Structural Engineering
Nationality: Egyptian
Home Address: Building 209 – Zone 2 – Second District – Fifth Settlement, New Cairo, Egypt
Languages: Arabic, English, Japanese

Academic Degrees:

Jan 1998–Jul 2002: Philosophy Degree (Structural Engineering), Indian Institute of Science, Bangalore, India (91.25%)
Jan 1993–Nov 1996: Master of Science (Civil Engineering), Minia University, Minia, Egypt
Sep 1987–May 1992: Bachelor of Science (Civil Engineering), Minia University, Minia, Egypt (86.66 %)

Citations & h-Index

	<u>All</u>	<u>Since 2018</u>
Citations:	1030	325
h-Index:	19	10
i10- Index:	26	10

Training Program for Doctoral Degree (20 Credited courses):

Course	Credits	Grade
MA 247: Mathematical methods	3.0	A (7/8)
CE 262N: Solid mechanics	3.0	A (7/8)
CE 263N: Finite element in structural analysis	3.0	S (8/8)
CE 265N: Structural dynamics	3.0	S (8/8)
CE 269N: Finite element in structural dynamics	3.0	B (6/8)
CE 274N: Random vibration and wavelet analysis	2.0	A (7/8)
CE 286N: Theory of plates and shells	3.0	S (8/8)
TGPA	--	7.3/8

Audited Courses: Structural Reliability Analysis (Prof. CS Manohar)

Professional Experience:

- Sep 2020-Aug 2021** Chairman of Civil Engineering Department
Giza Engineering Institute, Giza, Egypt
- Aug 2018-date** Expert of Damage Assessment at Financial Regulatory Authority
- May 2011-date:** Associate Professor
Department of Civil Engineering
Faculty of Engineering, Minia University, Minia 61111, Egypt
- Jan 2009-Apr 2010:** Visiting Faculty
Department of Urban and Environmental Engineering
Kyoto University, Kyoto 615-8540, Japan
- Apr 2008-Dec 2008:** Visiting Faculty
Department of Civil Engineering
Nagasaki University, Nagasaki 852-8521, Japan
- Aug 2004-Dec 2005:** Visiting Faculty
Department of Civil Engineering, Nagasaki University
Nagasaki 852-8521, Japan
- Nov 2002-Apr 2011:** Assistant Professor
Department of Civil Engineering
Faculty of Engineering, Minia University, Minia 61111, Egypt
- Jan 1998-Jul 2002:** Ph. D. Research Scholar
Department of Civil Engineering
Indian Institute of Science, Bangalore 560012, India
- Nov 1996-Nov 2002:** Teaching Assistant
Department of Civil Engineering
Faculty of Engineering, Minia University, Minia 61111, Egypt
- Nov 1992-Oct 1996:** Demonstrator
Department of Civil Engineering
Faculty of Engineering, Minia University, Minia 61111, Egypt

Universities I teach at:

- Faculty of Engineering, Minia University, Minia, Egypt
- Faculty of Fine Arts, Minia University, Minia, Egypt
- Faculty of Archeology, Cairo University, Giza, Egypt
- Faculty of Engineering, Damietta University, Damietta, Egypt
- Minia Engineering Institute, Minia, Egypt
- Giza Engineering Institute, Giza, Egypt

Courses I teach:

Earthquake Engineering
Structural Dynamics
Random Vibration and Stochastic Processes
Seismic Design of Structures
Design Seismic Codes
Finite Element Analysis
Stiffness Matrix Analysis
Theory of Structures
Structural Reliability Analysis
Structural Health Monitoring
Structural Control
Base-Isolation of Structures
Statistics and Uncertainty Modeling
Matlab/Mapple Software
SAP/STAAD Software
ANSYS Software

Research Interest:

Earthquake Engineering.
Design Seismic Codes.
Reliability Analysis.
Blast and fire-resistant design structures.
Random vibrations and Stochastic Processes.
Uncertainty Modeling.
Nonlinear dynamics.
Foundations dynamics.
Soil-structure interaction.
Water-structure Interaction.
Active and Passive Structural Control.
Health Assessment.
Base-isolation of Structures.

Academic Activities:

Associate Editor in Earthquake Engineering, *Frontiers in Built Environment*

Editorial Board Member, *Advances in Geological and Geophysical Engineering* (<http://agge.vkingpub.com/>)

Guest Editor, Special Issue on Earthquakes, *Natural Science*, Vol. 4, No. 28A, August 2012, pp. 595-699.

Evaluator, *Romanian National Council for Research and Development*, 2011-2015

Editor, *Current Advances in Civil Engineering* (<http://www.vkingpub.com/cace>)

Editorial Board Member, *Open Journal of Earthquake Research*

Editorial Board Member, *Earthquake Engineering and Hazard Mitigation*

Editorial Board Member, *International Research Journal of Engineering Science, Technology and Innovation*

Editorial Board Member, *International Journal of Mechanics & Applications* (<http://journal.sapub.org/mechanics>)

Editorial Board Member, *International Journal of Materials Engineering & Technology* (<http://www.pphmj.com>)

Editorial Board Member, *International Journal of Applied Engineering & Technology* (www.cibtech.org/jet.htm)

Editorial Board Member, *Journal of Civil Engineering and Science* (<http://www.ij-ces.org/>)

Editorial Board Member, *Japanese Journal of Solids and Structures* (<http://www.pphmj.com>)

Editorial Board Member, *Modern Applied Science* (<http://www.ccsenet.org/mas>)

Reviewer, *Journal of Structural Engineering* (ASCE)

Reviewer, *Journal of Engineering Mechanics* (ASCE)

Reviewer, *Earthquake Engineering & Structural Dynamics* (John Wiley)

Reviewer, *Structural Engineering and Mechanics* (Springer)

Reviewer, *Engineering Structures* (Elsevier)

Reviewer, *Earthquakes and Structures* (Springer)

Reviewer, *Structures and Buildings*

Reviewer, *Natural Hazards*

Reviewer, *Global Journals Inc.* (<https://globaljournals.org>)

Reviewer, *Natural Science* (<http://www.scirp.org/journal/ns/>)

Reviewer, *Indian Academy of Sciences* (SADHANA)

Reviewer, *Scientific Research and Essay*

Reviewer, *International Journal of Science and Technology Education Research*

Reviewer, *Journal of Engineering Sciences* (Assuit University)

Reviewer, *Journal of Engineering* (Minia University)

Structural seismic design optimization and earthquake engineering, Plevris V et al, ICI Global, Athens (Reviewed 3 chapters on optimal damper placement in buildings/bridges under seismic loads and seismic shape optimization)

Optimal design of structures, Structural reliability analysis

Health monitoring and life prediction of structures, Worst-case scenarios of structures

Base-isolation of tall structures and long-span bridges

Active and passive control of structures, Seismicity and design seismic codes

Protection of monuments against natural hazards, Safety of marine and offshore structures

Publications:

Journal Papers:

- J1.** Abbas, AM and Manohar CS, 2002. Investigations into critical earthquake load models within deterministic and probabilistic frameworks. *Earthquake Engineering & Structural Dynamics*, **31**, 813-832.
- J2.** Abbas, AM and Manohar, CS, 2002. Critical spatially-varying earthquake load models for extended structures. *Journal of Structural Engineering*, **29**: 39-52.
- J3.** Abbas, AM and Manohar CS, 2005. Reliability-based critical earthquake load models. Part 1: Linear structures. *Journal of Sound and Vibration*, **287**: 865-882.
- J4.** Abbas, AM and Manohar, CS, 2005. Reliability-based critical earthquake load models. Part 2: Nonlinear structures. *Journal of Sound and Vibration*, **287**: 883-900.
- J5.** Abbas AM, Takahashi K and Nakamura, S, 2005. Critical earthquake load models for elastic-plastic structures. *Journal of Earthquake Engineering, JSCE*, **28**: 1-10.
- J6.** Abbas, AM, 2006. Critical seismic load inputs for simple inelastic structures. *Journal of Sound and Vibration*, **296**: 949-967.
- J7.** Abbas, AM and Manohar, CS, 2007. Reliability-based vector nonstationary random critical earthquake excitations for parametrically excited systems. *Structural Safety*, **29**: 32-48.
- J8.** Moustafa, A and Takewaki, I, 2009. The use of probabilistic and deterministic measures to identify unfavorable earthquake records. *Journal of Zhejiang University, Science A*, **10**(5): 619-634.
- J9.** Moustafa, A, 2009. Critical earthquake load inputs for multi-degree-of-freedom inelastic structures. *Journal of Sound and Vibration*, **325**: 532-544.
- J10.** Moustafa, A, Mahadevan, S, Daigle, M, and Biswas, G, 2010. Structural and sensor damage identification using the bond graph approach. *Structural Control and Health Monitoring*, **17**: 178-197.
- J11.** Fujita, K, Moustafa, A and Takewaki, I, 2010. Optimal placement of viscoelastic dampers and supporting members under variable critical excitations. *Earthquakes and Structures*, **1**(1): 43-67.
- J12.** Moustafa, A, Ueno, K and Takewaki, I, 2010. Critical earthquake loads for SDOF inelastic structures considering evolution of seismic waves. *Earthquakes and Structures*, **1**(2):147-162.
- J13.** Moustafa, A and Takewaki, I, 2010. Deterministic and probabilistic representation of near-field pulse-like ground motion. *Soil Dynamics and Earthquake Engineering*, **30**: 412-422.
- J14.** Moustafa, A and Takewaki, I, 2010. Modeling critical strong ground motion sequences on inelastic structures. *Advances in Structural Engineering*, **13**(4): 665-679.
- J15.** Moustafa, A, 2010. Identification of resonant earthquake ground motion. *Indian Academy of Sciences*, **35**(3): 355-371.
- J16.** Moustafa, A and Takewaki, I, 2010. Characterization and modeling of near-fault pulse-like strong ground motion via damage-based critical excitation method. *Structural Engineering and Mechanics*, **34**(6): 755-778.
- J17.** Ueno, K, Fujita, K, Moustafa, A and Takewaki, I, 2011. Critical input for inelastic structures under evolving seismic waves. *Journal of Structural and Construction Engineering (Transactions of AIJ)*, **76** (659): 79-87 (in Japanese).
- J18.** Moustafa, A and Mahadevan, S, 2011. Modeling probabilistic critical earthquake inputs for structures using the site response spectra. *Asian Journal of Civil Engineering (Building and Housing)*, **12**(2): 107-151.
- J19.** Moustafa, A, 2011. Damage-based design earthquake loads for SDOF inelastic structures. *Journal of Structural Engineering, ASCE*, **137**(3): 456-467.
- J20.** Moustafa A, Takewaki I, 2011. Response of nonlinear SDOF structures to random acceleration sequences. *Engineering Structures*, **33**(4) 1251-1258.

- J21.** Moustafa, A and Mahadevan, S, 2011. Reliability analysis of uncertain structures using earthquake response spectra. *Earthquakes and Structures*, **2**(3): 279-295.
- J22.** Moustafa, A and Takewaki, I, 2012. Characterization of earthquake ground motion of multiple sequences, *Earthquakes and Structures*, **3**(5): 629-647.
- J23.** Moustafa, A and Sayed, M, 2014. Damage assessment of adjacent buildings under earthquake loads. *Engineering Structures*, **3**(61):153–165.
- J24.** Gharehbaghi, S, Moustafa, and Salajegheh, E, 2016. Optimum seismic design of reinforced concrete frame structures. *Computers and Concrete*, **17** (6): 761-786.
- J25.** Ahmed, A., Farghal, O., Moustafa, A. and Samier, M, 2017. Nonlinear finite element analysis of seismic performance of edge slab-column connections in R.C. buildings. *New York Science Journal*, **10**(4): 9-18.
- J26.** Moustafa, A. and Ameen, A, 2017. Damage analysis of inelastic structures under train-induced vibrations. *Journal of Engineering Sciences*, **3**(45): 284-300.
- J27.** Moustafa, A. and Hassan, B, 2017. Energy absorption and damage of inelastic sdof structures under blast loads. *Journal of Engineering Sciences*, **3**(45): 301-323.
- J28.** Hemed, S., Fahmy, A., Moustafa, A. and Abd El Hafez, M, 2019. The early basilica church, El-Ashmonein archaeological site, Minia, Egypt: Geo-environmental analysis and engineering characterization of the building materials. *Open Journal of Geology*, **9**(3): 157-186.
- J29.** Benahmed, B., Moustafa, A. and Badaoui, M., 2019. Comparison between DRF for displacement and acceleration spectra with uncertain damping for EC8. *Journal of Materials and Engineering Structures*, **6**: 345-358.
- J30.** Hariche, L., Benahmed, B., and Moustafa, A., 2021. Response spectrum with uncertain damping using artificial neural network. *International Journal of Engineering Research in Africa*, **56**: 136-144.

Journal Discussion Papers:

- JD1.** Moustafa, A, 2009. Discussion of the effect of energy concentration of earthquake ground motions on the nonlinear response of RC structures. *Soil Dynamics and Earthquake Engineering*, **29**: 1181-1183.
- JD2.** Moustafa, A, 2009. Discussion of a new approach of selecting real input ground motions for seismic design: The most unfavourable real seismic design ground motions. *Earthquake Engineering & Structural Dynamics*, **38**: 1143-1149.
- JD3.** Moustafa, A, 2010. Discussion of analytical model of ground motion pulses for the design and assessment of seismic protective systems. *Journal of Structural Engineering, ASCE*, **136**(2): 229-230.
- JD4.** Moustafa, A, 2011. Closure to discussion of critical earthquake load inputs for multi-degree-of-freedom inelastic structures. *Journal of Sound and Vibration*, **330**: 356–360.

Conference Papers:

- C1.** Abbas AM and Manohar CS, 2001. A comparative study on deterministic and stochastic critical earthquake load models. *Proceedings of International Conference in Civil Engineering*, Interline publishing, Bangalore, pp. 173-180.
- C2.** Abbas AM, 2001. Site-dependent design earthquake load models for structures. *Proceedings of the 8th ICOSSAR*, Newport Beach; California, Balkema Publications, pp. 1-8.
- C3.** Abbas AM, 2003. A revised draft for the Egyptian code for the calculation of earthquake loads on structures. *5th International Conference on Structural and Geotechnical Engineering*, pp. ST 153-164, Alexandria, Egypt.
- C4.** Abbas, A M, Daigle, M, Roychoudhury, Shantz, C, Biswas, G., Mahadevan, S, Koutsoukos, X, 2007. Fault diagnosis of civil structures using the bond graph approach, *Proceedings of International Conference on Bond Graph Modeling (ICBGM 2007)*, Nashville, TN, USA

- C5. Fujita, K, Moustafa, A and Takewaki, I, 2009. Optimal placement of viscoelastic dampers under uncertain earthquake input. *Proceedings of 58th National Congress of Theoretical and Applied Mechanics (NCTAM)*, Tokyo, 9-11 June.
- C6. Moustafa, A and Takewaki, I, 2009. Damage-based design earthquake loads for sdof inelastic structures. *International Conference on Computational Methods in Structural Dynamics & Earthquake Engineering*, Rhodes Island.
- C7. Moustafa, A, Mahadevan, S and Takewaki, I, 2009. Bond graph-based qualitative-quantitative health assessment of structures. *Proceedings of the second International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering*, Rhodes Island, 22-24 June.
- C8. Moustafa, A and Takahashi, K, 2009. Critical earthquake load inputs for multi-degree-of-freedom inelastic structures. *Proceedings of the 10th Conference on Structural safety and Reliability*, 13-17 September, Osaka.
- C9. Moustafa, A and Takewaki, I, 2009. Implication of earthquake and structural parameters on damage of inelastic structures. *13th International Conference on Structural and Geotechnical Engineering*, 27-29 December, Cairo.
- C10. Moustafa, A, 2009. Egypt seismicity and national seismic network. *Proceedings of the 13th International Conference on Structural and Geotechnical Engineering*, 27-29 December, Cairo.
- C11. Moustafa, A, Takewaki I, Wijeyewickrema, A, 2010. Selection of earthquake records for time-history analysis of structures. *Joint 7th International Conference on Urban Earthquake Engineering and 5th International Conference on Earthquake Engineering*, 3-5 March, Tokyo.
- C12. Moustafa, A., Mahmoud, S., 2012. Damage assessment of adjacent buildings with fixed bases under earthquake loads. *Proceedings of the 15th World Conference on Earthquake Engineering*, Lisboa.
- C13. Benahmed, B., Moustafa, A., 2019. Estimation of the damping reduction factor with uncertain damping for EC8. *Proceedings of the 6th International Earthquake Symposium*, Kocaeli.

Journal Special Issue:

JS11. Moustafa, A. Guest Editor, Special Issue on Earthquakes, Natural Science, Vol. 4, No. 28A, 2012: 595-699.

Published Books:

- B1. Moustafa, A (editor), 2012. *Advances in Geotechnical Earthquake Engineering-Soil Liquefaction and Seismic Safety of Dams and Monuments*, InTech, Croatia, ISBN: 978-953-51-0025-6.
- B2. Moustafa, A (editor), 2012. *Earthquake-Resistant-Structures - Design, Assessment and Rehabilitation*, InTech, Croatia, ISBN: 978-953-51-0123-9.
- B3. Takewaki, I, Moustafa, A and Fujita, K, 2013. *Improving the earthquake resilience of buildings- The worst case approach*, Springer, London, ISBN: 978-1-4471-4143-3.
- B4. Moustafa, A (editor), 2015. *Earthquake Engineering-From Engineering Seismology to Optimal Seismic Design of Engineering Structures*, InTech, Croatia, ISBN: 978-953-51-2039-1.

Book Chapters:

- CH1. Moustafa, A and Mahadevan, S. (2012). Seismic assessment of structural performance under future earthquake loads: *Health assessment of engineering structures using graphical models*, Plevris V, Mitropoulou CC and Lagaros ND (editors), ICI Global, Athens, Chapter 14: 342-369, ISSN: 978-1-4666-1640-0.

CH2. Moustafa, A (2102). Damage assessment of inelastic structures under simulated critical earthquakes: *Structural seismic design optimization and earthquake engineering*, Plevris V, Mitropoulou CC and Lagaros ND (editors), ICI Global, Athens, Chapter 6: 128-151, ISSN: 978-1-4666-1640-0.

CH3. Khatibinia, M., Gharehbaghi, S. and Moustafa, A. (2015). Seismic reliability-based design optimization of reinforced concrete structures including soil-structure interaction effects. *Earthquake Engineering- From Engineering Seismology to Optimal Seismic Design of Engineering Structures*. Moustafa, A. (editor). InTech, Croatia, 267-304.

Research Supervision:

1. Mohamed Gamal Gouda Hassaan, (2015). Effect of ground motion characteristics on RC rectangular ground supported liquid storage tanks, *M. Sc. Thesis, Structural Engineering Department, Faculty of Engineering, Cairo University*.
2. Basma Mohamed Fathy Hassan, (2017). Damage of inelastic structures under blast loads, *M. Sc. Thesis, Civil Engineering Department, Faculty of Engineering, Minia University*.
3. Mohammed Sameer Sebaq Mohammed, (2017). Nonlinear finite element analysis of seismic performance of edge slab-column connections in R.C. constructions, *M. Sc. Thesis, Civil Engineering Department, Faculty of Engineering, Assuit University*.
4. Al-Shaymaa Arafat Fathy Ameen, (2018). Damage analysis of inelastic structures under train vibrations, *M. Sc. Thesis, Civil Engineering Department, Faculty of Engineering, Minia University*.
5. Abdulrahman Fahmy (2019). The early basilica church, El-Ashmonein archaeological site, Minia, Egypt, *M. Sc. Thesis, Conservation Department, Faculty of Archaeology, Cairo University*.