



SAYED MAHMOUD

Professor of Structural & Earthquake Engineering

Personal Data

Nationality | Egyptian

Date of Birth | 30th January 1972

Department | Civil and Construction Engineering

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Language Proficiency

Language	Read	Write	Speak
Arabic	✓	✓	✓
English	✓	✓	✓

Academic Qualifications (Beginning with the most recent)

Date	Academic Degree	Place of Issue	Address
24-03-2009	PhD	Hirosaki University - Japan	Hirosaki- Aomori- Japan
30-12-2002	Master of Science in Civil Eng.	Assuit University - Egypt	Assuit - Egypt
May 1995	Bachelor of Civil Engineering	Helwan University - Egypt	Cairo - Egypt

PhD, Master or Fellowship Research Title: (Academic Honors or Distinctions)

PhD	Fully Funded Scholarship from Egyptian government to Study in Japan
Fellowship 1	Structural Mechanics Dept.- Lund University - ERASMUS
Fellowship 2	Earthquake and Bridge engineering Lab. Hokkaido University. Japan Society for the Promotion of Sciences (JSPS).

Professional Record: (Beginning with the most recent)

Job Rank	Place and Address of Work			Date
Professor	IAU	College of Engineering	KSA	Sep. 2021 - present
Associate Professor	IAU	College of Engineering	KSA	Jan. 2017 – Aug. 2021
Assistant Professor	IAU	College of Engineering	KSA	Nov. 2013 - Jan. 2017
Assistant Professor	KAU	Faculty of Engineering	KSA	Sep. 2011 - Aug. 2013
Assistant Prof.	Faculty of Engineering at Mataria – Helwan University			27-10-2009 – on leave
Research Fellow	Structural Mechanics Dept. Lund University - Sweden			13-08-2010



Administrative Positions Held: (Beginning with the most recent)

Administrative Position	Office	Date

Scientific Achievements

Published Refereed Scientific Researches

(In Chronological Order Beginning with the Most Recent)

#	Name of Investigator(s)	Research Title	Publisher and Date of Publication
1	Mahmoud S et al.	Structural Response and Damage Evaluation of a Typical Highrise RC Building in Dubai under an Earthquake with Single and Multiple Peaks.	2022, <i>Journal of Civil Engineering and Management</i> . 28(2):81-92. https://doi.org/10.3846/jcem.2022.15783
2	Mahmoud S. Salman A.	Cost Estimate and Input Energy of Floor Systems in Low Seismic Regions	2022, <i>Computers, Materials & Continua</i> . 71(2):2150-217. doi:10.32604/cmc.2022.022357
3	Mahmoud S., Salman A.	Impact of shear wall design on performance and cost of RC buildings in moderate seismic region.	Sep. 2021, <i>Earthquakes and Structures</i> . 21(3).
4	Mahmoud S.	In-plane shear-wall configuration effects on the seismic performance of multistory reinforced-concrete buildings.	2021, International Journal of Civil Engineering.19 (10), pp: 1195-1208 https://doi.org/10.1007/s40999-021-00634-8 .
5	Mahmoud S. Alqarni A, Saliba J, Ibrahim A, H, Genidy, M, Diab, H.	Influence of floor system on seismic behavior of RC buildings to forward directivity and fling-step in the near-fault region.	2021, Structures. 30, pages 803-817. https://doi.org/10.1016/j.istruc.2021.01.052
6	Mahmoud S., Elserhead M. Abdallah W.	Seismic performance of high-rise buildings in selected regions in Saudi Arabia according to different seismic codes	May - 2020 - Earthquake Engineering and Engineering Vibration. 20(1), pages 179-181 https://doi.org/10.1007/s11803-021-2013-z
7	Mahmoud S.	Mitigation of seismic collision between adjacent structures using roof water tanks	February - 2020 - Earthquakes and Structures. 18(2):171-184. https://doi.org/10.12989/eas.2020.18.2.171
8	Abd-Elhamed Mahmoud S.	Simulation analysis of TMD controlled building subjected to far-and near-fault records considering soil-structure interaction.	November - 2019 - Journal of Building Engineering. 100930. https://doi.org/10.1016/j.jobee.2019.100930 .
9	Mahmoud S.	Blast-load-induced interaction between adjacent multi-story buildings	July - 2019 - Earthquakes and Structures. 17(1):17-29 https://doi.org/10.12989/eas.2019.17.1.017



10	Abd-Elhamed Mahmoud S.	Seismic response evaluation of structures on improved liquefiable soil.	April - 2019 - European Journal of Environmental and Civil Engineering. https://doi.org/10.1080/19648189.2019.1595738 .
11	Mahmoud S.	Horizontally connected high-rise buildings under earthquake excitation.	March- 2019 - Ain-Shams Engineering Journal. 10(1):227-241 · https://doi.org/10.1016/j.as ej.2018.12.007
12	Shehata E A et. al., Mahmoud S.	Seismic Pounding Effects on Adjacent Buildings in Series with Different Alignment Configurations.	August - 2018 - Steel & Composite Structures. 28(3):289-308. DOI: 10.12989/scs.2018.28.3.289
13	Abd-Elhamed A. Yasser Shaaban Mahmoud S.	Predicting Dynamic Response of Structures under Earthquake Loads Using Logical Analysis of Data	Buildings. Vol. 8(4), 2018, pp. 61-73.
14	Abd-Elhamed Mahmoud S.	Comparison between a typical and a simplified model for blast load-induced structural response.	Journal of Physics: Conference Series 814 (1), 2017- 012007.
15	Abdelhameed A. and Mahmoud S.,	Linear and Nonlinear Dynamic Analysis of Masonry Infill RC Framed Buildings,	Civil Engineering Journal. Vol. 3 (10), 2017, pp. 881-896.
16	Mahmoud S. Genidy M. and Tahoon H.	Time-history analysis of reinforced concrete frame buildings with soft	The Arabian Journal for Science and Engineering, Vol. 42(3): PP. 1201–1217.
17	Jankowski R. and Mahmoud S.	Linking of adjacent three-storey buildings for mitigation of structural pounding during earthquakes.	Bulletin of Earthquake Engineering – Springer – 2016 Vol. 14: PP. 3075–3097
18	Mahmoud S. Abdallah W. Hanna, N., and Abdelaal A.	Seismic Response Evaluation of Connected Super-tall Structures	Structures and Buildings – ice Publishing - 2016 Vol. 169 (11), 2016, pp. 840-852.
19	El-Shami M., Mahmoud S., and Elabd M.	Effect of Floor Openings on the Capacity of Composite Space Trusses	Journal of King Saud University Engineering Sciences – Springer - 2016
20	Abdelhameed A. and Mahmoud S.	Nonlinear Static Analysis of reinforced Concrete Framed Buildings-A Case Study on Cairo Earthquake	Journal of Engineering Research – Elsevier – 2016. Vol. 4 (4), 2016, pp. 1-23.
21	Mahmoud S.	Dynamic Response of adjacent Buildings under Explosive Loads.	The Arabian Journal for Science and Engineering – Springer - 2016
22	El-Shami M., Mahmoud S	Structural behavior of window laminated glass plies using new interlayer materials	Journal of King Saud University Engineering Sciences – Springer – 2015.
23	Genidy M. Hanna N., Tahoon H. and Mahmoud S	Seismic response evaluation of moment-resisting-frame multi-storey buildings with soft storey.	International Journal of Civil and Structural Engineering Research – Research Publishing. 2015
24	Abdelhameed A. and Mahmoud S.	Effect of Infill Walls on Response of Multi Storey Reinforced Concrete Structure	International Journal of Civil, Environmental, Structural, Construction and Architectural Engineering - 2015.



25	Mahmoud S. and Abdallah W	Response Analysis of Multi-Storey RC Buildings under Equivalent Static and Dynamic Loads According to Egyptian Code	International Journal of Civil and Structural Engineering. Research Publishing. 2014
26	Mahmoud S.	Blast loads induced response and the associated damage of buildings considering SSI	Earthquake and Structures. Techno Press - (2014).
27	Moustafa A. Mahmoud S.	Damage assessment of adjacent buildings under earthquake loads,	Engineering Structures. Elsevier-2014.
28	Mahmoud S. Gutub S	Earthquake induced pounding-involved response of base-isolated buildings incorporating soil flexibility,	Advances in Structural Engineering – SAGE Publisher. 2013.
29	Mahmoud S. , Abdelhameed A., and Jankowski R.	Earthquake-Induced Pounding between equal height Multi-Storey Buildings Considering Soil-Structure Interaction	Bulletin of Earthquake Engineering, – Springer – 2013.
30	Mahmoud S. , Austrell PE., and Jankowski R.	Simulation of the response of base-isolated buildings under earthquake excitations considering soil-structure interaction.	Earthquake Engineering and Engineering Vibration – Springer – 2013.
31	Mahmoud S. , Abdelhameed A., and Jankowski R.	Behaviour of colliding multi-storey buildings under earthquake excitations considering soil-structure interaction.	Applied Mechanics and Materials. Trans. Tech. Publication. 2012
32	Mahmoud S. , Austrell PE., and Jankowski R.	Non-linear behaviour of base-isolated building supported on flexible soil under damaging earthquakes.	Key Engineering Materials, Trans. Tech. Publication. 2011.
33	Elazab M.S., Mahmoud S. and Abdelhameed A.	Seismic Response Evaluation of Buildings Considering Soil Flexibility.	Advanced Materials research, Trans. Tech. Publication. 2011.
34	Mahmoud S. and Jankowski R.	Modified linear viscoelastic model of earthquake-induced structural pounding.	Iranian Journal of Science and Technology, 2011.
35	Mahmoud S. and Jankowski R.	Pounding-involved response of isolated and non-isolated buildings under earthquake excitation.	Earthquake and Structures, Techno Press - 2011.
36	Mahmoud S. and Jankowski R.	Linear viscoelastic modelling of damage-involved structural pounding during earthquakes.	Key Engineering Materials,
37	Mahmoud S. and Jankowski R.	Inelastic Damage-Involved Response of Colliding Buildings During Earthquakes.	Key Engineering Materials Trans. Tech. Publication. 2009.
38	Mahmoud S. and Jankowski R.	Elastic and Inelastic Multi-Storey Buildings under Earthquake Excitation with the Effect of Pounding	Journal of Applied Sciences - 2009
39	Mahmoud S. Chen X. and Jankowski R.	Structural Pounding Models with Hertz Spring and Nonlinear Damper.	Journal of Applied Sciences. 2008
40	Mahmoud S. and Chen X.	A Verified Inexact Implicit Runge-Kutta Method for Nonsmooth ODEs.	Numerical Algorithms. Springer - 2008



41	Chen X. and Mahmoud S.	Implicit Runge-Kutta Methods for Lipschitz Continuous Ordinary Differential Equations	SIAM Journal on Numerical Analysis. 2008
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Refereed Scientific Research Papers Accepted for Publication

#	Name of Investigator(s)	Research Title	Journal	Acceptance Date

Scientific Research Papers Presented to Refereed Specialized Scientific Conferences

#	Name of Investigator(s)	Research Title	Conference and Publication Date
1	Mahmoud S. and El-Shami M.	Dynamic Response of Insufficiently Separated Buildings under Explosive Load,	International Conference on Civil Engineering and Environmental Engineering., Tokyo, Japan, February, 2-3, 2015, Paper No.576.
2	Abdallah W. Hanna N. Mahmoud S. and Taha M.,	Seismic Behavior of Multi-Storey RC Buildings Having different Slab Systems,	International Conference on Civil Engineering and Environmental Engineering., Tokyo, Japan, February, 2-3, 2015, Paper No.595.
3	Mahmoud S.	Response of Base-isolated Buildings Incorporating Soil Flexibility and Pounding with Retaining Walls.	13th World Conference on Seismic Isolation, Energy Dissipation and Active Vibration Control of Structures, Sendai, Japan, September, 24-27, 2013.
4	Abdelhameed A. and Mahmoud S.	Effect of Soil-Flexibility on Nonlinear Response of High-rise Buildings during Collisions under the El-Centro Earthquake.	10th International Conference on Urban Earthquake Engineering, Tokyo, Japan, March 01-02, 2013.
5	Moustafa A. Mahmoud S.	Damage assessment of adjacent buildings with fixed bases under earthquake loads.	15th World Conf. on Earthquake Engineering, Lisbon, Portugal, September 24-28, 2012
6	Mahmoud S. , Abdelhameed A. and Elazab M.S.	Seismic Response Evaluation of Colliding Buildings Considering Soil Flexibility.	9th International Conference on Urban Earthquake Engineering & 4th Asia Conference on Earthquake Engineering, Tokyo, Japan, March 06-08, 2012
7	Mahmoud S and Austrell PE.,	Response Behaviour of Isolated Buildings to Earthquake Excitations Considering Soil Flexibility.	8th International Conference on Urban Earthquake Engineering, Tokyo, Japan, March 07-08, 2011.
8	Mahmoud S and Jankowski R.	Seismic response evaluation for isolated and non-isolated buildings considering pounding.	9th US National and 10th Canadian Conference on Earthquake Engineering, Toronto, July 25-29, 2010.Paper No. 285



9	Mahmoud S and Jankowski R.,	Impact models with Hertz spring and nonlinear damper for simulation of pounding-involved structural vibrations during earthquakes.	The 17th International Congress on Sound & Vibration (ICSV17), Cairo, July 18-22, 2010
10	Mahmoud S.	Modified linear viscoelastic model for elimination of the tension force in the linear viscoelastic.	14th World Conf. on Earthquake Engineering, Beijing, October 12-17, 2008.
11	Mahmoud S.	Nonlinear Models for Earthquake Structural Pounding.	The workshop on "Optimization: Modeling and Algorithms, Tokyo 23 March 2007.
12	X. Chen and Mahmoud S.	Convergence of the Runge-Kutta method for nonlinear models of structural pounding.	The 2007 Spring Meeting of Mathematical Society of Japan at Saitama University, 27 March - 30 March, 2007.

Completed Research Projects

#	Name of Investigator(s) (Supported by)	Research Title	Report Date
1	Sayed Mahmoud and Abbas Mostafa. (Deanship of Scientific Research KAU).	Damage assessment of adjacent buildings under earthquake loads	2013
2	Sayed Mahmoud and Mostafa Elshami. (Deanship of Scientific Research UoD).	Dynamic response and damage assessment of adjacent buildings to explosive loads with respect to soil-structure interaction	2015
3	Mostafa Elshami and Sayed Mahmoud. (Deanship of Scientific Research UoD).	Effect of Floor Openings on the Capacity of Composite Space Trusses.	2015
4	Mostafa Elshami and Sayed Mahmoud. (Deanship of Scientific Research UoD).	Behavior of Window Laminated Glass Plies using New Interlayer Materials	2015

Current Researches

#	Research Title	Name of Investigator(s)
1		

Contribution to Scientific Conferences and Symposia

#	Conference Title	Place and Date of the Conference	Extent of Contribution
1	International Conference on Civil Engineering and Environmental Engineering.	Tokyo, Japan, February, 2-3, 2015.	50 %
2	13th World Conference on Seismic Isolation, Energy Dissipation and Active Vibration Control of Structures.	Sendai, Japan, September, 24-27, 2013.	100 %
3	10th International Conference on Urban Earthquake Engineering,	Tokyo, Japan, March 01-02, 2013.	50 %



4	15th World Conf. on Earthquake Engineering.	Lisbon, Portugal, September 24-28, 2012	50 %
5	9th International Conference on Urban Earthquake Engineering & 4th Asia Conference on Earthquake Engineering.	Tokyo, Japan, March 06-08, 2012	33 %
6	8th International Conference on Urban Earthquake Engineering.	Tokyo, Japan, March 07-08, 2011.	50 %
7	9th US National and 10th Canadian Conference on Earthquake Engineering.	Toronto, July 25-29, 2010. Paper No. 285	50 %
8	The 17th International Congress on Sound & Vibration (ICSV17).	Cairo, July 18-22, 2010	50 %
9	14th World Conf. on Earthquake Engineering.	Beijing, October 12-17, 2008.	100 %
10	The workshop on "Optimization: Modeling and Algorithms.	Tokyo 23 March 2007.	100 %
11	The 2007 Spring Meeting of Mathematical Society of Japan.	Tokyo, Saitama University, 27 March - 30 March, 2007.	50 %

Membership of Scientific and Professional Societies and Organizations

- The Egyptian Syndicate of Engineers.
- The Egyptian Society for Earthquake Engineering.
- Earthquake Engineering Research Institute (EERI) membership

International Reviewer:

- Engineering Structures – Elsevier
- Bulletin of Earthquake Engineering - Springer
- Earthquake Engineering and Engineering Vibrations - Springer
- Advances in Structural Engineering – Multi-science
- Journal of Engineering Mechanics – ASCE
- Steel and Composite Structures – Techno Press
- Ain-Shams Engineering Journal - Elsevier
- Journal of Civil Engineering and Construction Technology
- Building and Structures – ice publishing
- Composites Part B: Engineering – Elsevier
- Structures–Elsevier
- International Journal of Civil Engineering- Springer
- The Structural Design of Tall and Special Buildings – Wiley
- Innovative Infrastructure Solutions

Teaching Activities

Undergraduate

#	Course/Rotation Title	No./Code	Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics)
1	Design of Reinforced Concrete Structures.	CONEN – 451	IAU - Main Instructor



2	Foundation Design	CONEN – 452	IAU - Main Instructor
3	Analysis of Indeterminate Structures	CONEN – 421	IAU - Main Instructor
4	Topics in Concrete Structures	CONEN – 583	IAU - Main Instructor
5	Topics in Structural Analysis	CONEN – 573	IAU - Main Instructor
6	Senior design Project I	CONEN – 521	IAU - Main Instructor
7	Senior design Project II	CONEN – 522	IAU - Main Instructor
8	Statics	ENG - 232	IAU - Main Instructor

Brief Description of Undergraduate Courses Taught: (Course Title – Code: Description)

1	CONEN – 451 Design of Reinforced Concrete Structures.	3 credits (lectures and Tutorials)
2	CONEN – 452 Foundation Design	3 credits (lectures and Tutorials)
3	CONEN – 421 Analysis of Indeterminate Structures	3 credits (lectures)
4	CONEN – 583 Topics in Concrete Structures	3 credits (lectures)
5	CONEN – 573 Topics in Structural Analysis	3 credits (lectures)
6	CONEN – 521 Senior design Project I	2 credits (lectures)
7	CONEN – 522 Senior design Project II	4 credits (lectures)
8	ENG – 232 STATICS	3 credits (lectures)

Postgraduate

#	Course/Rotation Title	No./Code	Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics)
	Tall Buildings	BUSC 633-314	IAU - Main Instructor
	Thesis Research	BUSC 700-467	IAU - Main Instructor

Brief Description of Postgraduate Courses Taught: (Course Title – Code: Description)

1	BUSC 633-314 Tall Buildings	3 credits (lectures)
2	BUSC 700-467 Thesis Research	6 credits (lectures)

Course Coordination

#	Course Title and Code	Coordination	Co-coordination	Undergrad.	Postgrad.	From	to

Guest/Invited Lectures for Undergraduate Students

#	Activity/Course Title and Code	Subject	College and University or Program	Date

Student Academic Supervision and Mentoring

#	Level	Number of Students	From	to
1	Senior Design Project I & II	04	2013	2014
2	Senior Design Project I & II	04	2014	2015
3	Senior Design Project I & II	08 (G1 & G2)	2015	2016



4	Senior Design Project I & II	08 (G1 & G2)	2016	2017
5	Senior Design Project I & II	03	2017	2018
6	Senior Design Project I & II	03	2018	2019
7	Senior Design Project I & II	08 (G1 & G2)	2019	2020
8	Senior Design Project I & II	04	2020	2021

Supervision of Master and/or PhD Thesis

#	Degree Type	Title	Institution	Date
1	PhD	Numerical Simulation of the Seismic Response of Colliding Buildings Considering Soil-Structure Interaction	Helwan University	Awarded 2013
2	Master	SEISMIC RESPONSE EVALUATION OF MOMENT-RESISTING-FRAME MULTI-STOREY BUILDINGS WITH SOFT STOREY AT DIFFERENT LEVELS	Helwan University	Awarded 2016
3	Master	Seismic response evaluation of connected super-tall structures	Helwan University	Awarded 2016
4	Master	Performance of high-rise buildings according to SBC and other seismic design codes.	Imam Abdulrahman Bin Faisal University	Awarded 2019
5	Master	Comparative study on the seismic response behavior of R.C buildings with different slab systems According to Egyptian Building Code.	Helwan University	Awarded 2019

Ongoing Research Supervision

#	Degree Type	Title	Institution	Date
6	PhD	Effect of earthquake motions with fling-step and forward-directivity on longitudinal and transverse response of RC bridges.	Helwan University	In progress
7	Master	Performance of reinforced concrete bridge structures to near-fault earthquake motions	Helwan University	In progress

Administrative Responsibilities, Committee and Community Service (Beginning with the most recent)

Administrative Responsibilities

#	From	To	Position	Organization

Committee Membership

#	From	To	Position	Organization
1	2015	Present	member	Quality assurance committee for the Dept.
2	2019	Present	member	Academic Affairs committee for the Dept.
3	2019	2020	member	Community Service Committee
4	2018	2019	head	Senior Design Project Committee
5	Sep. 2015	Present	member	Quality, Accreditation and Strategic Planning Committee



6	Nov. 2015	2018	member	ABET Accreditation committee for the Department of Construction Engineering
7	Nov. 2015	2018	member	ABET Accreditation committee for the College of engineering
8	Nov. 2015	2018	member	Quality assurance committee for the College of engineering
9	2013	2015	member	Representative of the Department of Construction engineering in Academic Affairs committee (2013-2015)

Scientific Consultations

#	From	To	Institute	Full-time or Part-time

Volunteer Work

#	From	To	Type of Volunteer	Organization

AWARDS & APPRECIATION

#	Description	Year
1	Best Teacher and Performance Award	2015/2016
2	Outstanding Research Award	2016/2017
3	Outstanding Research Award	2018/2019
4	Best Performance in ABET Technical Committee	2018/2019

Personal Key Competencies and Skills: (Computer, Information technology, technical, etc.)

1	Structural Software Package: SAP2000
2	Structural Software Package: ETABS
3	Structural Software Package: SAFE
4	Structural Software Package: CSI COLUMNS
5	Mathematical Packages: MATLAB
6	Drawing Packages: AutoCAD
7	Document Preparation Packages: Ms-Word, LaTeX.

Last Update

01 / 06 / 2023