

HUSSEIN MOHAMED ELSANADEDY, Ph.D.



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CITIZENSHIP

Citizen of the Arab Republic of Egypt

MARITAL STATUS

Married

EDUCATION

- a) **Ph.D. (June 2002)** in Structural Engineering, Department of Civil & Environmental Engineering, School of Engineering, **University of California, Irvine, California, USA.**

DISSERTATION: *Seismic Performance and Analysis of Ductile Composite-Jacketed Reinforced Concrete Bridge Columns*

- b) **M.Sc.** (September 1997) in Structural Engineering, Department of Civil Engineering, College of Engineering at Mataria, Helwan University, Cairo, Egypt

THESIS: *Repair and Strengthening of Partially Loaded Reinforced Concrete Beams Using Concrete Overlays*

- c) **B.Sc.** (May 1993) in Civil Engineering, Helwan University, Cairo, Egypt

Distinction with Honor (92.8%) (Valedictorian of graduating class)

Throughout the 5-year enrolment, I was ranked 1st in order of merit among 80 students.

FINAL YEAR PROJECT: *Design and analysis of reinforced concrete structures: a multistory residential building; an elevated water tank, a workshop with 30-m span, a multistory parking garage, and a mosque (Distinction)*

ACADEMIC POSITIONS

- February 2022 – Present, **Professor** at King Saud University, Saudi Arabia
- March 2015 – January 2022, **Associate Professor** at King Saud University, Saudi Arabia
- November 2008 – February 2015, **Assistant Professor** at King Saud University, Saudi Arabia
- January 2019 – Present, **Associate Professor** at Helwan University, Egypt
- September 2004 – December 2019, **Assistant Professor** at Helwan University, Egypt
- March 2005 – July 2008, **Assistant Professor** at Misurata University, Libya
- October 1997 – September 2004, **Assistant Lecturer** at Helwan University, Cairo, Egypt
- September 1997 – June 2002, **Ph.D. Student** at University of California, Irvine, USA
- January 1998 – June 2002, **Research Assistant** at University of California, Irvine, USA
- December 1994 – October 1997, **Demonstrator** at Helwan University, Cairo, Egypt

AWARDS AND HONORS

- Included in Stanford University List of top 2% World Scientists, 2024
- Included in Stanford University List of top 2% World Scientists, 2023
- Engineer Tarik Al-Qasabi Award for Excellence in Civil Engineering in Saudi Arabia, 2022
- Included in Stanford University List of top 2% World Scientists, 2022
- Engineer Tarik Al-Qasabi Award for Excellence in Civil Engineering in Saudi Arabia, 2020
- Included in Stanford University List of top 2% World Scientists, 2020
- Engineer Tarik Al-Qasabi Award for Excellence in Civil Engineering in Saudi Arabia, 2017
- Included in Marquis Who's Who publications, 2012
- Research Award, Misurata University, Libya, 2006
- Regents' Ph.D. Dissertation Fellowships, University of California, Irvine, 2000 – 2002
- Ph.D. Scholarship from Ministry of Higher Education, Egypt, 1997 – 2002
- Engineering Syndicate Prize, Cairo, Egypt, 1993
- Valedictorian of graduating class in Civil Engineering, Helwan University, Egypt, 1993
- Undergraduate Distinction Awards, Helwan University, Cairo, Egypt, 1989 – 1993

RESEARCH INTERESTS

- Behavior of structural systems under extreme loading conditions
- Rehabilitation of RC structures using advanced materials *viz.* FRP & FRCM composites
- Numerical modeling of steel and reinforced concrete structural systems

RESEARCH PROJECTS AT KING SAUD UNIVERSITY

Ongoing Projects

- Flexural Strengthening of RC Wide Beams with Planted Columns for Deflection Control
- Shear Strengthening of RC Wide Beams with Planted Columns
- Effect of post-construction cutouts on the behavior of RC one-way ribbed slabs after being strengthened using FRP composites
- Studying FRP schemes for the strengthening and repair of wall-like RC columns
- Behavior of FRP-strengthened continuous RC deep beams with web openings
- Strengthening of L-shaped RC columns using FRP composites

Completed Projects

- Hybrid UHPC/NSM CFRP strips vs. traditional systems for flexural upgrading of RC beams
- Upgrading beam-column joints in steel-framed buildings for progressive collapse mitigation
- Progressive collapse assessment of steel framed building considering buckling
- Investigation of strengthening techniques for axially loaded L-shaped RC columns
- Vulnerability assessment and mitigation strategies against terrorist blast attacks on existing precast RC buildings in Saudi Arabia
- Vulnerability assessment and mitigation strategies against terrorist blast attacks on existing monolithic RC buildings in Saudi Arabia
- Experimental and numerical study on FRP composites strengthening RC beams with flexure and shear openings
- Effect of elevated temperature environments on RC one-way slabs flexurally upgraded with different techniques
- Blast response of GFRP-strengthened infill masonry walls
- Behavior and design aspects of FRP-strengthened URM walls under out-of-plane loading
- Shear strength prediction of HSC slender beams without web reinforcement
- Effect of elevated temperature environments on RC columns axially strengthened with different techniques
- Reliability analysis of containment structure of nuclear power plants
- Numerical investigation of intermediate crack debonding in FRP-strengthened RC beams
- Experimental and numerical investigation for the flexural strengthening of RC beams using near-surface mounted steel or GFRP bars
- Development of an advanced risk and vulnerability assessment methodology and framework for buildings in Riyadh against blast generated waves
- Textile reinforced mortar for strengthening of RC members
- Effect of blast loading on FRP-strengthened RC columns
- Investigation of punching shear resistance of high strength concrete flat plates
- Experimental & numerical investigation of size effects in FRP-wrapped concrete columns
- Behavior of FRP-confined concrete after high temperature exposure

PATENTS

- 1) Abbas H., Al-Salloum Y.A., Almusallam T.H., **Elsanadedy H.M.**, Alrubaidi M. (2019). "Strengthening System for Beam-Column Connection in Steel Frame Buildings to Resist Progressive Collapse" **US Patent # US 10,415,230 B1**, 17 Sept. 2019.
- 2) Alrubaidi M., Abbas H., **Elsanadedy H.M.**, Almusallam T.H., Al-Salloum Y.A. (2021). "Reinforced Joint for Beam-Column Connection," **US Patent # US 10,900,215 B1**, 26 Jan. 2021.

- 3) Al-Salloum Y.A., Abbas H., Alrubaidi M., Almusallam T.H., **Elsanadedy H.M.** (2021). "Damped reinforced joint for beam-column connection," **U.S. Patent # 10,934,734 B1**, 02 March 2021.

PUBLICATIONS

□ **Articles in Refereed Journals**

- 1) **Elsanadedy, H.**, Khawaji, M., Abbas, H., Almusallam, T., & Al-Salloum, Y. (2023). "Numerical modeling for assessing progressive collapse risk of RC buildings exposed to blast loads," *Structures*, 48, pp. 1190-1208.
DOI: <http://dx.doi.org/10.1016/j.istruc.2023.01.040>
- 2) **Elsanadedy, H.**, Abbas, H., Almusallam, T., & Al-Salloum, Y. (2023). "Performance of Concentrically Loaded RC Wall-like Columns Upgraded with Innovative Hybrid NSM/CFRP System," *Polymers*, 15(2), 378.
DOI: <http://dx.doi.org/10.3390/polym15020378>
- 3) **Elsanadedy, H.**, Alaoud, L., Abbas, H., Almusallam, T. and Al-Salloum, Y. (2023). "Externally bonded CFRP composites versus steel stirrups for the confinement of substandard lap spliced GFRP bars in RC beams," *Composite Structures*, 306, p.116602.
DOI: <http://dx.doi.org/10.1016/j.compstruct.2022.116602>
- 4) Abbas, H., **Elsanadedy, H.**, Alaoud, L., Almusallam, T. and Al-Salloum, Y. (2023). "Effect of confining stirrups and bar gap in improving bond behavior of glass fiber reinforced polymer (GFRP) bar lap splices in RC beams," *Construction and Building Materials*, 365, p.129943.
DOI: <http://dx.doi.org/10.1016/j.conbuildmat.2022.129943>
- 5) Abbas, H., Ibrahim, S.M., Al-Hazmi, N., **Elsanadedy, H.**, Almusallam, T. and Al-Salloum, Y. (2022). "Axial Compression Behavior of Wall-like Reinforced Concrete Columns Retrofitted Using Different FRP Schemes," *Buildings*, 13(1), p.26.
DOI: <http://dx.doi.org/10.3390/buildings13010026>
- 6) **Elsanadedy H.**, Sezen H., Abbas H., Almusallam T., Al-Salloum Y. (2022). "Progressive collapse risk of steel framed building considering column buckling," *Engineering Science and Technology, an International Journal*, 101193.
DOI: <http://dx.doi.org/10.1016/j.jestch.2022.101193>
- 7) **Elsanadedy, H.M.** and Abadel, A.A. (2022). "High-fidelity FE models for assessing progressive collapse robustness of RC ordinary moment frame (OMF) buildings," *Engineering Failure Analysis*, 106228.
DOI: <https://doi.org/10.1016/j.engfailanal.2022.106228>
- 8) Salah, A., **Elsanadedy, H.**, Abbas, H., Almusallam, T., & Al-Salloum, Y. (2022). "Behavior of axially loaded L-shaped RC columns strengthened using steel jacketing," *Journal of Building Engineering*, 47, 103870.
DOI: <https://doi.org/10.1016/j.jobe.2021.103870>

- 9) Alrubaidi, M., Abbas, H., **Elsanadedy, H.**, Almusallam, T., Iqbal, R., & Al-Salloum, Y. (2022). "Experimental and FE study on strengthened steel beam-column joints for progressive collapse robustness under column-loss event," *Engineering Structures*, 258, 114103.
DOI: <https://doi.org/10.1016/j.engstruct.2022.114103>
- 10) Al-Salloum, Y., Alaoud, L., **Elsanadedy, H.**, Albidah, A., Almusallam, T., & Abbas, H. (2022). "Bond Performance of GFRP Bar-Splicing in Reinforced Concrete Beams," *Journal of Composites for Construction*, 26(2), 04022006.
DOI: [http://dx.doi.org/10.1061/\(ASCE\)CC.1943-5614.0001190](http://dx.doi.org/10.1061/(ASCE)CC.1943-5614.0001190)
- 11) **Elsanadedy, H.M.** (2021). "New moment-resisting beam-column joints to increase progressive collapse resistance of precast concrete buildings," *Journal of Building Engineering* (2021): 102884.
DOI: <https://doi.org/10.1016/j.jobe.2021.102884>
- 12) Abadel, A., **Elsanadedy, H.**, Almusallam, T., Alaskar, A., Abbas, H. and Al-Salloum, Y., (2021). "Residual compressive strength of plain and fiber reinforced concrete after exposure to different heating and cooling regimes," *European Journal of Environmental and Civil Engineering*, pp.1-20.
DOI: <https://doi.org/10.1080/19648189.2021.1960898>
- 13) **Elsanadedy H.**, Alrubaidi M., Abbas H., Almusallam T., Al-Salloum Y. (2021). "Progressive collapse risk of 2D and 3D steel-frame assemblies having shear connections," *Journal of Constructional Steel Research*, Volume 179, April 2021, 106533
DOI: <https://doi.org/10.1016/j.jcsr.2021.106533>
- 14) Abbas H., Siddiqui N.A., Almusallam T.H., Abadel A.A., **Elsanadedy H.**, Al-Salloum Y.A. (2021). "Effect of rebar spacing on the behavior of concrete slabs under projectile impact," *Structural Engineering and Mechanics*, Techno Press, Vol. 77, No. 3 (2021).
DOI: <https://doi.org/10.12989/sem.2021.77.3.001>
- 15) **Elsanadedy, H.M.**, Al-Salloum, Y.A., Alrubaidi, M.A., Almusallam, T.H. and Abbas, H. (2021). "Finite element analysis for progressive collapse potential of precast concrete beam-to-column connections strengthened with steel plates," *Journal of Building Engineering*, 34, p.101875.
DOI: <https://doi.org/10.1016/j.jobe.2020.101875>
- 16) **Elsanadedy, H.M.**, Al-Salloum, Y.A., Alrubaidi, M.A., Almusallam, T.H., Siddiqui, N.A. and Abbas, H. (2021). Upgrading of precast RC beam-column joints using innovative FRP/steel hybrid technique for progressive collapse prevention. *Construction and Building Materials*, 268, p.121130.
DOI: <https://doi.org/10.1016/j.conbuildmat.2020.121130>
- 17) **Elsanadedy H.M.** (2021). "Simplified analytical models for progressive collapse assessment of precast RC beam-column assemblies upgraded with hybrid NSM/FRP system," *International Journal of Civil & Environmental Engineering IJCEE-IJENS* Vol: 21 No: 01.
- 18) **Elsanadedy H.M.**, Abbas H., Almusallam T.H. and Al-Salloum Y.A. (2020). "Hybrid UHPC/NSM CFRP strips vs. traditional systems for flexural upgrading of RC beams–Experimental and FE study," *Composite Structures*, p.113291.

DOI: <https://doi.org/10.1016/j.compstruct.2020.113291>

- 19) Alrubaidi M., **Elsanadedy H.**, Abbas H., Almusallam T. and Al-Salloum Y. (2020). "Investigation of different steel intermediate moment frame connections under column-loss scenario," *Thin-Walled Structures*, 154, p.106875.

DOI: <https://doi.org/10.1016/j.tws.2020.106875>

- 20) Almusallam T., Al-Salloum Y., **Elsanadedy H.**, Tuan N., Mendis P. and Abbas H. (2020). Development limitations of compressive arch and catenary actions in reinforced concrete special moment resisting frames under column-loss scenarios. *Structure and Infrastructure Engineering*, 16(12), pp.1616-1634.

DOI: <https://doi.org/10.1080/15732479.2020.1719166>

- 21) **Elsanadedy H.M.** (2019). "Residual compressive strength of high-strength concrete exposed to elevated temperatures," *Advances in Materials Science and Engineering*, 2019.

DOI: <https://doi.org/10.1155/2019/6039571>

- 22) **Elsanadedy H.M.**, Abbas H., Almusallam T.H. and Al-Salloum Y.A. (2019). "Organic versus inorganic matrix composites for bond-critical strengthening applications of RC structures—state-of-the-art review," *Composites Part B: Engineering*, 174, p.106947.

DOI: <https://doi.org/10.1016/j.compositesb.2019.106947>

- 23) Abbas H., Al-Salloum Y.A., **Elsanadedy H.M.** and Almusallam T.H. (2019). "ANN models for prediction of residual strength of HSC after exposure to elevated temperature," *Fire safety journal*, 106, pp.13-28.

DOI: <https://doi.org/10.1016/j.firesaf.2019.03.011>

- 24) **Elsanadedy H.M.**, Al-Salloum, Y.A., Almusallam, T.H., Ngo T., & Abbas H. (2019). "Assessment of progressive collapse potential of special moment resisting RC frames – Experimental and FE study," *Engineering Failure Analysis*, 105, 896-918.

DOI: <http://dx.doi.org/10.1016/j.engfailanal.2019.07.045>

- 25) **Elsanadedy H.M.**, Al-Salloum Y.A., Almusallam T.H., Alshenawy A.O. and Abbas H. (2019). "Experimental and numerical study on FRP-upgraded RC beams with large rectangular web openings in shear zones," *Construction and Building Materials*, Volume 194, pp. 322-343.

DOI: <http://dx.doi.org/10.1016/j.conbuildmat.2018.10.238>

- 26) Almusallam T.H., Al-Salloum Y.A., **Elsanadedy H.M.**, Alshenawy A.O. and Iqbal R.A. (2018). "Behavior of FRP-strengthened RC beams with large rectangular web openings in flexure zones – Experimental and numerical study," *International Journal of Concrete Structures and Materials*, 12:47, 28p.

DOI: <http://dx.doi.org/10.1186/s40069-018-0272-5>

- 27) Almusallam T.H., **Elsanadedy H.M.**, Al-Salloum Y.A., Siddiqui N.A. and Iqbal R.A. (2018). "Experimental investigation on vulnerability of precast RC beam-column joints to progressive collapse," *KSCCE Journal of Civil Engineering*, Volume 22, Issue 10, pp. 3995–4010.

DOI: <http://dx.doi.org/10.1007/s12205-018-1518-0>

- 28) Al-Salloum Y.A., Alrubaidi M.A., **Elsanadedy H.M.**, Almusallam T.H. and Iqbal R.A. (2018). "Strengthening of precast RC beam-column connections for progressive collapse mitigation using bolted steel plates," *Engineering Structures*, Volume 161, 15 April 2018, pp. 146-160.
DOI: <http://dx.doi.org/10.1016/j.engstruct.2018.02.009>
- 29) **Elsanadedy H.**, Almusallam T., Al-Salloum Y. and Abbas H. (2017). "Investigation of precast RC beam-column assemblies under column-loss scenario," *Construction and Building Materials*, Vol. 142, pp. 552-571.
DOI: <http://dx.doi.org/10.1016/j.conbuildmat.2017.03.120>
- 30) **Elsanadedy H.**, Almusallam T., Al-Salloum Y. and Iqbal R. (2017). "Effect of high temperature on structural response of reinforced concrete circular columns strengthened with fiber reinforced polymer composites," *Journal of Composite Materials*, Sage Publications, Vol. 51(3), pp. 333–355.
DOI: <http://dx.doi.org/10.1177/0021998316645171>
- 31) **Elsanadedy H.M.**, Al-Salloum Y.A., Al-Zaheri Z.M., Alsayed S.H. and Abbas H. (2016). "Behavior and design aspects of FRP-strengthened URM walls under out-of-plane loading," *Journal of Composites for Construction*, ASCE, Vol. 20(6).
DOI: [http://dx.doi.org/10.1061/\(ASCE\)CC.1943-5614.0000695](http://dx.doi.org/10.1061/(ASCE)CC.1943-5614.0000695)
- 32) **Elsanadedy H.M.**, Abbas H., Al-Salloum Y.A. and Almusallam T.H. (2016). "Shear strength prediction of HSC slender beams without web reinforcement," *Materials and Structures*, Vol. 49, pp. 3749–3772.
DOI: <http://dx.doi.org/10.1617/s11527-015-0752-x>
- 33) Al-Salloum Y.A., Almusallam T.H., **Elsanadedy H.M.** and Iqbal R.A. (2016). "Effect of elevated temperature environments on the residual axial capacity of RC columns strengthened with different techniques," *Construction and Building Materials*, Vol. 115, pp. 345–361.
DOI: <http://dx.doi.org/10.1016/j.conbuildmat.2016.04.041>
- 34) Alsayed S.H., **Elsanadedy H.M.**, Al-Zaheri Z.M., Al-Salloum Y.A. and Abbas H. (2016). "Blast response of GFRP-strengthened infill masonry walls," *Construction and Building Materials*, Vol. 115, pp. 438–451.
DOI: <http://dx.doi.org/10.1016/j.conbuildmat.2016.04.053>
- 35) Al-Salloum Y.A., Almusallam T.H., Khawaji M.Y., Ngo T., **Elsanadedy H.M.** and Abbas H. (2015). "Progressive collapse analysis of RC buildings against internal blast," *Advances in Structural Engineering*, Vol. 18(12), pp. 2181–2192.
DOI: <http://dx.doi.org/10.1260/1369-4332.18.12.2181>
- 36) Mosallam A., **Elsanadedy H.M.**, Almusallam T.H., Al-Salloum Y.A. and Alsayed S.H. (2015). "Structural evaluation of reinforced concrete beams strengthened with innovative bolted/bonded advanced FRP composites sandwich panels," *Composite Structures*, Vol. 124, pp. 421–440.
DOI: <http://dx.doi.org/10.1016/j.compstruct.2015.01.020>
- 37) **Elsanadedy H.M.**, Abbas H., Al-Salloum Y. and Almusallam T.H. (2015). "Closure to "Prediction of Intermediate Crack Debonding Strain of Externally Bonded FRP Laminates in RC Beams and One-Way Slabs," *Journal of Composites for Construction*, ASCE, Vol. 19(2).

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- 38) **Elsanadedy H.M.**, Almusallam T.H., Alsayed S.H. and Al-Salloum Y.A. (2015). "Experimental and FE study on RC one-way slabs upgraded with FRP composites," *KSCE Journal of Civil Engineering*, Vol. 19(4), pp. 1024–1040.

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- 39) Almusallam T.H, **Elsanadedy H.M.** and Al-Salloum Y.A. (2014). "Effect of longitudinal steel ratio on behavior of RC beams strengthened with FRP composites – Experimental and FE study," *Journal of Composites for Construction*, ASCE, Vol. 19(1).

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- 40) **Elsanadedy H.M.**, Almusallam T.H., Alharbi, Y.R. and Al-Salloum Y.A. (2014). "Progressive collapse potential of a typical steel building due to blast attacks," *Journal of Constructional Steel Research*, Vol. 101, pp. 143–157.

DOI: <http://dx.doi.org/10.1016/j.jcsr.2014.05.005>

- 41) **Elsanadedy, H.M.**, Abbas, H., Al-Salloum, Y.A. and Almusallam, T.H. (2014). "Prediction of intermediate crack debonding strain of externally bonded FRP laminates in RC beams and one-way slabs," *Journal of Composites for Construction*, ASCE, Vol. 18(5).

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- 42) Al Haddad M.S., **Elsanadedy H.M.** and Iqbal R.A. (2014). "Seismic Evaluation of the ACI Code Provisions for Lap Splicing of Longitudinal Bars in R/C Rectangular Bridge Columns," *Arabian Journal for Science and Engineering*, Vol. 39(4), pp 2495–2511.

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- 46) **Elsanadedy H.M.**, Al-Salloum Y.A., Alsayed S.H and Iqbal R. (2012). "Experimental and numerical investigation of size effects in FRP-wrapped concrete columns," *Construction and Building Materials*, Vol. 29, pp. 56–72.

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- 52) Abbas H., Al-Salloum Y.A., Alsayed S.H., **Elsanadedy H.M.** and Iqbal R.A. (2011). "Numerical study for retrofitting of RC columns for blast loading," *Magazine of New Building Materials and Construction World (NBMCW)*, India, June 2011.
- 53) Almusallam T.H., **Elsanadedy H.M.**, Abbas H., Alsayed S.H. and Al-Salloum Y.A. (2010). "Progressive collapse analysis of a RC building subjected to blast loads," *Structural Engineering & Mechanics*, Techno Press, Vol. 36(3), pp. 301–319.
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- 54) Almusallam T.H., **Elsanadedy H.M.**, Abbas H., Ngo T. and Mendis P. (2010). "Numerical analysis for progressive collapse potential of a typical framed concrete building," *International Journal of Civil and Environmental Engineering*, Vol. 10(2), pp. 40–46.
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□ **Articles in Refereed Conference Proceedings**

1) Al-Rubaidi M.A. and **Elsanadedy H.M.** (2016). "Progressive Collapse Potential of Existing Precast RC Beam-Column Connections – Experimental Study," Fifth International Conference On Advances in Civil and Structural Engineering – CSE 2016, 12 - 13 March 2016, Kuala Lumpur, Malaysia.

2) Almusallam T.H., Al-Salloum Y.A., **Elsanadedy H.M.**, Iqbal R.A., Abbas H. and Siddiqui, N.A. (2016). "Risk assessment of precast reinforced concrete buildings against blast loads: A case study," SEMC 2016, the Sixth International Conference on Structural Engineering, Mechanics and Computation, 5-7 September 2016, Cape Town, South Africa.

3) Al-Salloum Y.A., Almusallam T.H., Ngo T., **Elsanadedy H.M.** and Abbas H. (2016). "Progressive Collapse Analysis of a Medium-Rise Circular RC Building Against Blast Loads," ASME 2016 35th International Conference on Ocean, Offshore and Arctic Engineering (OMAE2016), Busan, South Korea, June 19-24, 2016.

4) Almusallam T.H., Mendis P., Ngo T., **Elsanadedy H.M.**, Abbas H., Alsayed S.H., Al-Salloum Y.A. and Alhaddad M.S. (2010). "Progressive collapse analysis of a typical RC building of Riyadh," IMPLAST 2010 - SEM Fall Conference, University of Rhode Island, USA, Oct. 12-14, 2010.

5) **Elsanadedy H.M.**, Almusallam T.H., Abbas H., Al-Salloum Y.A., Alsayed S.H. and Alhaddad M.S. (2010). "Effect of blast loading on CFRP-retrofitted RC columns," IMPLAST 2010 - SEM Fall Conference, University of Rhode Island, USA, Oct. 12-14, 2010.

6) Almusallam T.H., **Elsanadedy H.M.**, Abbas H., Mendis P., Ngo T., Alsayed S.H. and Al-Salloum Y.A. (2010). "Blast analysis of a typical reinforced concrete building of Riyadh," 2010 International Symposium on Safety Science and Technology, Hangzhou, Zhejiang Province, China, October 26-29, 2010.

- 7) Al-Salloum Y.A., Almusallam T.H., **Elsanadedy H.M.** and Abadel A.A. (2010). "Effect of specimen size on the strength of FRP- confined concrete," ICPIIC 2010 – 13th International Congress on Polymers in Concrete, Madeira, Portugal, 10-12 February 2010.
- 8) Almusallam T.H., Al-Salloum Y. A., Alsayed S. H. and **Elsanadedy H.M.** (2010). "Textile reinforced mortar for shear strengthening of RC beams", CONSEC'10 - Sixth International Conference on Concrete under Severe Conditions, Merida, Yucatan, Mexico, 7-9 June 2010.
- 9) **Elsanadedy H.M.** (2006). "Parametric study on ductility characteristics of R/C rectangular bridge columns with lap spliced reinforcement," Proceedings of the 3rd Libyan National Conference on Building Materials and Structural Engineering, Misurata, Libya.
- 10) Haroun M.A., Mosallam A.S. **Elsanadedy H.M.** and Elbahar M.R. (2004). "Ductility enhancement versus strength enhancement for seismic retrofit of bridge column bents," ***Keynote Paper***, Proceeding of the International Conference on Future Vision and Challenges for Urban Development, Housing and Building Research Center, Cairo, Egypt, December 2004, pp. 109-123.
- 11) Haroun M.A. and **Elsanadedy H.M.** (2002). "Seismic analysis, testing, and design of composite-jacketed RC bridge columns" ***Invited Keynote Paper*** at the ACUN-4, the International Conference on Technology Convergence in Composite Application, University of New South Wales, Sydney Australia.
- 12) Mosallam A.S., Haroun M.A., Abdel-Kareem A.H., **Elsanadedy H.M.**, Elbahar M.R. and Abdi, F. (2002). "Service and ultimate behavior of the Schuyler Heim bridge hybrid composite deck," Proceedings of the 9th International Conference on Composites Engineering, San Diego, USA (***Distinguished Paper***).
- 13) **Elsanadedy H.M.**, Haroun M.A. and Mosallam A.S. (2002). "Criteria for seismic retrofit design of deficient RC bridge columns by FRP jackets," Proceedings of the 9th International Conference on Composites Engineering, San Diego, USA.
- 14) **Elsanadedy H.M.**, Haroun M.A. and Salama A.E. (2002). "Design recommendations for seismic retrofit of shear-deficient reinforced concrete bridge columns with advanced composite jackets," Vital Links in Securing Our Mobility, 2002 International Bridge Conference. Official Proceedings of the 19th Annual IBC, Engineers' Society of Western Pennsylvania, Pittsburgh, USA.
- 15) Haroun M.A., **Elsanadedy H.M.** and Elbahar M.R. (2002). "Design evaluation of seismically retrofitted reinforced concrete bridge column bents by infill walls," Proceedings of the Seventh US National Conference on Earthquake Engineering, Boston, USA.
- 16) Haroun M.A., Feng M.Q., **Elsanadedy H.M.** and Mosallam A.S. (2002). "Composite jackets for the seismic retrofit and repair of bridge columns," Proceedings of the Seventh US National Conference on Earthquake Engineering, Boston, USA.
- 17) Haroun M.A. and **Elsanadedy H.M.** (2001). "Numerical models for composite-jacketed reinforced concrete bridge columns," Proceedings of the International Conference on FRP Composites in Civil Engineering, Hong Kong, pp. 849-858.
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Proceedings of the International Conference on FRP Composites in Civil Engineering, Hong Kong, pp. 839-848.

- 19) Mosallam A.S., Haroun M.A., **Elsanadedy H.M.**, El-Bahar M.R. and Abdel-Kareem A.H. (2001). "Theoretical and experimental study on behavior of unreinforced brick walls retrofitted with composites," Proceedings of the 9th International Conference on Structural Faults and Repair, London, UK (CD ROM).
- 20) Haroun M.A., **Elsanadedy H.M.**, Yland C.V. and Mosallam A.S. (2001). "Repair and structural upgrade of R/C columns using polymeric composite laminates," Proceedings of the Eleventh International Offshore and Polar Engineering Conference, Stavanger, Norway, pp. 698-702.
- 21) Haroun M.A. and **Elsanadedy H.M.** (2001). "A model for predicting the behavior of bridge columns with lap-spliced reinforcement under lateral loading," Proceedings of the ACUN-3, the International Conference on Technology Convergence in Composite Application, University of New South Wales, Sydney Australia, pp. 561-568.
- 22) Mosallam A.S. and **Elsanadedy H.M.** (2000). "Cyclic performance of reinforced concrete beam-column connections repaired & upgraded with carbon/epoxy laminates," Proceedings of the 45th International SAMPE Symposium and Exhibition, Vol. 45, Long Beach, California, USA, pp. 1823-1831.
- 23) Haroun M.A., Mosallam A.S., **Elsanadedy H.M.** and Gillette K. (2000). "Repair and upgrade of R/C two-way slab with carbon/epoxy laminates," Proceedings of the 45th International SAMPE Symposium and Exhibition, Vol. 45, Long Beach, California, USA, pp. 1813-1822.
- 24) Mosallam A.S., Chakrabarti P., Sim S., and **Elsanadedy H.M.** (2000). "Seismic response of reinforced concrete moment connections repaired and upgraded with FRP composites," Proceedings of the 2nd Conference on Seismic Repair & Rehabilitation of Structures (SRRS2), Fullerton, California, USA, pp. 59-72.
- 25) Mosallam A.S., Lancey T., Kreiner J., Haroun M.A., and **Elsanadedy H.M.** (2000). "Repair and upgrade of R/C two-way slab with carbon/epoxy laminates," Proceedings of the 2nd Conference on Seismic Repair & Rehabilitation of Structures (SRRS2), Fullerton, California, USA, pp. 119-130.
- 26) Haroun M.A. and **Elsanadedy H.M.** (2000). "Prediction of cyclic performance of composite-jacketed squat reinforced concrete bridge columns," Proceedings of the 2nd Conference on Seismic Repair & Rehabilitation of Structures (SRRS2), Fullerton, California, USA, pp. 108-118.
- 27) Mosallam A.S., Haroun M.A., **Elsanadedy H.M.** and Gillette, K. (2000). "Experimental and numerical analysis of two-way concrete slabs repaired with polymer composites," Proceedings of the ACUN-2, the International Composites Conference, University of New South Wales, Sydney Australia, pp. 185-190.
- 28) Haroun M.A., Yland C.V. and **Elsanadedy H.M.** (1999). "Finite element modeling of structural reinforced concrete grid walls," Developments in Analysis and Design Using Finite Element Methods, Proceedings of the Seventh International Conference on Civil and Structural Engineering Computing, Oxford, England, pp. 155-159.
- 29) Haroun M.A., Yland C.V. and **Elsanadedy H.M.** (1999). "Qualification testing of new innovative structural wall system," *Invited Keynote Paper*, Sixth International Exhibition and Conference for Buildings and Construction, Inter Build 99, Cairo, Egypt.

- 30) Helmy S.H., **Elsanadedy H.M.**, Moussa A. and Tarkhan M. (1998). "Repair and Strengthening of Partially Loaded R.C Beams," 1st Int. Conf. of Civil Eng. ICCE-I, Vol. 2 pp. 315-328. Helwan University, Cairo, Egypt.

TECHNICAL REVIEW

Technical reviewer for the following periodicals:

- Journal of Composites for Construction, ASCE
- Journal of Structural Engineering, ASCE
- Engineering Structures, Elsevier Publishing
- Engineering Failure Analysis, Elsevier Publishing
- Construction and Building Materials, Elsevier Publishing
- Composite Structures, Elsevier Publishing
- Composites: Part B, Elsevier Publishing
- Journal of Building Engineering, Elsevier Publishing
- Structures, Elsevier Publishing
- Latin American Journal of Solids and Structures
- Smart Structures and Systems, Techno Press
- Earthquakes and Structures, Techno Press
- KSCE Journal of Civil Engineering
- Arabian Journal for Science and Engineering
- Journal of King Saud University Engineering Science

ACADEMIC SUPERVISION

- Advisor for six Master students at King Saud University:
 - Alharbi, Y. R. (2011), "Potential of progressive collapse of typical steel buildings against blast generated waves," MS Thesis, King Saud University.
 - Khawaji, M. Y. (2011), "Assessment of progressive collapse potential of RC buildings in Riyadh due to blast attacks," MS Thesis, King Saud University.
 - Alrubaidi. M. A. (2016), "Rehabilitation of Beam-Column Connections in Existing Precast Concrete Buildings for Progressive Collapse Mitigation," MS Thesis, King Saud University.
 - Salah, A. A. (2020), "Investigation of Strengthening Techniques for Axially Loaded L-Shaped Reinforced Concrete Columns," MS Thesis, King Saud University.
 - Al Kallas, A. M. (2022), "Effect of Post-Construction Cutouts on The Behavior of RC One-Way Ribbed Slabs After Being Strengthened Using FRP Composites," MS Thesis, King Saud University.
 - Baatiah, A. (2024), "Strengthening of RC Wide Beams with Planted Columns for Deflection Control," MS Thesis, King Saud University (Under Preparation).
- Advisor for two Ph.D. student at King Saud University:
 - Alrubaidi, M. A. (2020), "Upgrading Beam-Column Connections in Steel Framed Buildings for Progressive Collapse Mitigation," Ph.D. Thesis, King Saud University.
 - Almahbashi, M. A. (2023), "Behavior of Strengthened Continuous HSC Deep Beams with Post-Construction Openings," Ph.D. Thesis, King Saud University. (*Under Preparation*)
- Advisor for graduation projects of undergraduate students at King Saud University.
- Advisor for graduation projects of undergraduate students at Misurata University, Libya.

PROFESSIONAL AFFILIATIONS

- Member, American Concrete Institute (ACI)
- Member, American Society of Civil Engineers (ASCE)
- Member, Saudi Council of Engineers, Saudi Arabia
- Member, Egyptian Engineering Syndicate, Cairo, Egypt

TEACHING EXPERIENCE

<u>Institute</u>	<u>Courses Taught</u>
College of Engineering, King Saud University, Saudi Arabia	Structural Dynamics Structural Analysis I Reinforced Concrete Design I Repair and Rehabilitation of Concrete Structures Reinforced Concrete Design for Architects Senior Design Project
College of Engineering, Misurata University, Libya	Strength of Materials I Structural Analysis II Reinforced Concrete Design I Reinforced Concrete Design II Reinforced Concrete Design III Senior Design Project
College of Engineering, Helwan University, Egypt	Structural Analysis I Reinforced Concrete Design I Reinforced Concrete Design II Reinforced Concrete Design III Senior Design Project

WORK & TECHNICAL EXPERIENCE

- **King Saud University**, Kingdom of Saudi Arabia 2009 – till now

Structural Engineering Consulting for: (1) Makkah Haram Expansion Project, (2) Madinah Haram Expansion Project, (3) King Abdullah Waqf Project in Madinah, (4) Structural Health Monitoring of Wadi-Laban Cable-Stayed Bridge in Riyadh, (5) Structural Health Monitoring of Gulf Bridge in Riyadh, (6) Structural Health Monitoring of Exit-8 Ramp Bridge in Riyadh, (7) King Khaled International Airport – Terminal 2 Expansion.

- **ODAC, Misurata, Libya** 2005 –2008

Structural Engineering Design of Several Projects such as:

- El-Keremat Water Plant, Tripoli, Libya
 - 500-m³ elevated R/C tank of 30-m height
 - 1000-m³ ground R/C reservoir

- Sert Marketplace Mosque, Sert, Libya
 - 2-story mosque of 1500-m² area, with minaret of 32-m height
- Benghazi Medical Center, Benghazi, Libya
 - 5-story R/C building of 500-m² area
- Seloq Housing Project, Seloq, Libya
 - 5000 villas (ground units)
 - 450 R/C buildings (4-story height)
- Derna Central Library, Derna, Libya
 - 2-story R/C building of 2800-m² area

Structural Engineering Consulting of Several Projects such as:

- Sert Housing Project, Sert, Libya
 - 128 R/C buildings (4-story height) on pile foundation
 - One-story mosque of 1400-m² area on pile foundation
 - One-story shopping center of 550-m² area on pile foundation
 - 2-story school of 2800-m² area on pile foundation
 - One-story kindergarten of 1200-m² area on pile foundation
 - 2-story health center of 600-m² area on pile foundation
 - Al-Abyar Housing Project, Al-Abyar, Libya
 - 64 R/C buildings (4-story height)
 - 3-story shopping center of 1500-m² area
 - One-story clinic of 600-m² area
 - 3-story school of 3500-m² area
 - El-Marg Housing Project, El-Marg, Libya
 - 300 R/C buildings (4-story height)
 - 500 precast villas (ground units)
 - 3-story R/C office building of 1800-m² area
 - Derna Housing Project, Derna, Libya
 - 250 R/C buildings (4-story height)
 - 2-story police station of 600-m² area
 - 2-story fire station of 500-m² area
- **DMJMH+N, Orange, California, USA** 2002 –2003

Structural Engineering Design of Several Consulting Projects such as:

- ❑ Oyster Point Hilton in San Francisco, California, USA
 - The project consists of 11-story reinforced concrete SMRF building on pile foundation.

- ❑ Progressive Collapse Analysis of Hill Air Force Base Building, Utah, USA
 - The project consists of 20,000 square foot, 3-story building with exterior CMU walls and interior steel gravity columns.

COMPUTER EXPERIENCE

Drafting, Editing and Data Processing:

AutoCAD
SigmaPlot
EViews

MS Office
Grapher
OriginPro

Finite Element Packages:

CSi SAFE
CSi ETABS
STAAD PRO
ANSYS
ABAQUS

CSi SAP2000
CSi Bridge
LS-DYNA
ANSYS AUTODYN
MARC