



CURRICULUM VITAE

AYMAN ELZOHAIKY, PH.D., P.E.

Assistant Professor, Department of Engineering & Technology
Texas A&M University-Commerce, Commerce, TX 75429, USA.
Tel: 903.468.8683, Fax: 903.886.5960, Email: Ayman.Elzohairy@tamuc.edu

EDUCATION

- University of Missouri, Columbia, MO, USA** 08/2013 – 07/2018
Ph.D. in Structural Engineering
Department of Civil and Environmental Engineering
Dissertation title: “*Monotonic and Fatigue Assessment of Post-Tensioned Steel-Concrete Composite Beams*”
Advisor: Prof. Hani Salim
- Zagazig University, Zagazig, Egypt** 09/2005 – 04/2010
M.Sc. in Structural Engineering
Department of Structural Engineering
Thesis title: “*Strengthening of Continuous Composite Beams Using FRP*”
Advisors: Prof. Ashraf El-Shihy
- Zagazig University, Zagazig, Egypt** 09/1999 – 06/2004
B.Sc. in Civil Engineering

PROFESSIONAL EXPERIENCE

Academic:

- Assistant Professor**, Department of Engineering & Technology, Texas A&M University-Commerce, Commerce, TX, USA. 09/2019 – Present
- Ad-Interim Assistant Professor**, Department of Engineering & Technology, Texas A&M University-Commerce, Commerce, TX, USA. 01/2019 – 5/2019
- Adjunct Instructor**, Department of Civil and Environmental Engineering, University of Missouri, Columbia, MO, USA. 08/2018 – 12/2018
- Graduate Research and Teaching Assistant**, Department of Civil Engineering, University of Missouri, Columbia, MO, USA. 08/2013 – 07/2018
- Lecturer**, Department of Structural Engineering, Zagazig University, Zagazig, Egypt. 05/2010 – 07/2013
- Graduate Research and Teaching Assistant**, Department of Structural Engineering, Zagazig University, Zagazig, Egypt. 03/2006 – 04/2010

Industrial (Part-time):

ACE Arab Consulting Engineers: Structural design (Residential Buildings design section)
06/2010 – 06/2012

BCE-Behairy Consulting Engineering: Structural design (High Rise Buildings and bridges design sections)
03/2007 – 08/2008

PCE-Pyramids Consulting Engineering: Structural design (High Rise Buildings and bridges section)
08/2004 – 08/2006

PROFESSIONAL MEMBERSHIPS AND CERTIFICATIONS

I am a Professional Engineer (PE) with the Texas Board of Professional Engineers and Land Surveyors (PELS) since 3/10/2021.

Member of American Society of Civil Engineering (M.ASCE)

Member of American Concrete Institute (M.ACI)

Member of Structural Engineers Association of Texas (M.SEAoT)

HONORS

- INTERDISCIPLINARY RESEARCHERS OF THE YEAR 2022-2023: *“This award speaks well of my teaching at A&M-Commerce”*. Texas A&M University-Commerce. 2023
- PAUL W. BARRUS DISTINGUISHED FACULTY AWARD FOR TEACHING: *“This award speaks well of my teaching at A&M-Commerce”*. Texas A&M University-Commerce. 2023
- RESEARCH, SCHOLARSHIP, & CREATIVE ACTIVITY – “UNFETTERED THOUGHT” AWARD: *“This award speaks well of my research at A&M-Commerce”*. Texas A&M University-Commerce. 2022
- CHUCK ARIZE JUNIOR FACULTY AWARD HONOR: *“This award speaks well of my research, teaching, and service at A&M-Commerce”*. Texas A&M University-Commerce. 2020
- Zagazig University Honor for: *“Best M.Sc. in engineering and technology of advanced science”* 2011
- Egyptian Engineers Syndicate Honor:
 - * Outstanding Engineers for excellence in Engineering Education (M.Sc.) 2010
 - * Outstanding Engineers for excellence in Engineering Education (B.Sc.) 2004
- 5 State Awards for Outstanding Undergraduate Students, Egypt. 1999 - 2004

PUBLICATIONS

Journal Papers (* corresponding author)

1. Abbas A. Allawi, Ehab Ghazi, Teghreed H. Ibrahim, **El-Zohairy, A.***, and Hussain A. Jabir (2024) “Simulation and Design Model for Reinforced Concrete Slabs with Lacing Systems” Journal of Advances in Structural Engineering, Accepted for publication.

2. Nawar, M.T., Matar, E., **El-Zohairy, A.***, Alaaser, A., and Maaly, H. (2024) “Experimental and FE Analysis of the Rotational Stiffness of Semi-Rigid Steel Column Base”. Structures, Accepted for publication.
3. Nawar, M.T.; **El-Zohairy, A.***; Arafa, I.T. (2023) Finite Element Modeling and Analysis of Perforated Steel Members under Blast Loading. Modelling 2023, 4, 628-649. <https://doi.org/10.3390/modelling4040036>
4. Salem, T.N.; **El-Zohairy, A.***; Abdelbaset, A.M. (2023) The Static and Dynamic Behavior of Steel Storage Tanks over Different Types of Clay Soil. CivilEng, 4, 1169-1181. <https://doi.org/10.3390/civileng4040064>
5. Emara, M.; Salem, M.A.; Mohamed, H.A.; Shehab, H.A.; **El-Zohairy, A.*** (2023) Shear Strengthening of Reinforced Concrete Beams Using Engineered Cementitious Composites and Carbon Fiber-Reinforced Polymer Sheets. Fibers 2023, 11, 98. <https://doi.org/10.3390/fib11110098>
6. Ibrahim, T.H., Allawi, A.A., Oukaili, N.K., **El-Zohairy, A.*** (2023) “Theoretical Analysis of Composite RC Beams with Pultruded GFRP Beams Subjected to Impact Loading” *Journal of Engineering, Technology & Applied Science Research*, 13(6), 12097-12107. <https://doi.org/10.48084/etasr.6424>
7. Allawi, A.A, Chai, H.K., Majeed, A.A., **El-Zohairy, A.***, Al-Sherrawi, M.H., Edaan, E.M., and Ibrahim, T.H. (2023). “Experimental and FE Analysis of Reinforced Concrete Multi-cell Box Girders Retrofitted with Carbon Fiber Reinforced Polymer Strips under Torsion” *Journal of Advances in Structural Engineering*, 26(14). <https://doi.org/10.1177/13694332231196511>
8. Mohammed, S.D.; Ibrahim, T.H.; Salman, B.F.; Allawi, A.A.; **El-Zohairy, A.*** (2023) Structural Behavior of Reactive Powder Concrete under Harmonic Loading. Buildings, 13, 1917. <https://doi.org/10.3390/buildings13081917>
9. Mahmood, E.M.; Ibrahim, T.H.; Allawi, A.A.; **El-Zohairy, A.*** (2023) Experimental and Numerical Behavior of Encased Pultruded GFRP Beams under Elevated and Ambient Temperatures. Fire, 6, 212. <https://doi.org/10.3390/fire6050212>
10. **El-Zohairy, A.***; Mustafa, S.; Shaaban, H.; Salim, H.; Allawi, A.A. (2023) Numerical Modeling and Analysis of Strengthened Steel–Concrete Composite Beams in Sagging and Hogging Moment Regions. CivilEng, 4, 483-505. <https://doi.org/10.3390/civileng4020028>
11. Nawar, M.T.; **El-Zohairy, A.***; Maaly, H.M.; Husain, M.; Salama, I.; Mousa, E. (2023) Prestressed Steel-Concrete Composite I-Beams with Single and Double Corrugated Web. Buildings, 13, 647. <https://doi.org/10.3390/buildings13030647>
12. Ahmed, S.; **El-Zohairy, A.***; Eisa, A.S.; Mohamed, M.A.E.-A.B.; Abdo, A. (2023) Experimental Investigation of Self-Compacting Concrete with Recycled Concrete Aggregate. Buildings, 13, 856. <https://doi.org/10.3390/buildings13040856>
13. **El-Zohairy, A.**, Sanchez, M., Abediniangerabi, B., and Moler, P. (2023) “Performance of Rubberized Concrete and the Effect of Temperature and Stainless-steel Fibers” *Buildings Journal*, 13(2), 280. <https://doi.org/10.3390/buildings13020280>
14. Ibrahim TH, Allawi AA, **El-Zohairy A.*** (2023) “Experimental and FE analysis of composite RC beams with encased pultruded GFRP I-beam under static loads” *Advances in Structural Engineering*, 26(3): 516–532 <https://doi.org/10.1177/13694332221130795>
15. Abbas A. Allawi, Arshad Nadhom Shubber, Mohammed Al Gharawi, **Ayman El-Zohairy***, Teghreed H. Ibrahim, Ali Hussein Ali Al-Ahmed, and Ibrahim T. Arafa (2023). “Enhancement of RC T-beams Toughness using Laced Stirrups Reinforcement for Blast Response Predictions” *Journal of Structural Concrete*, 24(3), 3839-3856. <https://doi.org/10.1002/suco.202200894>
16. Emara, M.; **El-Zohairy, A.***; Fekry, M.; Husain, M. (2022) “Effect of Using ECC Layer on the Flexural Performance of RC Beams Previously Strengthened with EB CFRP Laminates” *Sustainability* 2022, 14, 16990. <https://doi.org/10.3390/su142416990>

17. Mahmood, E.M.; Allawi, A.A.; **El-Zohairy, A.*** (2022) “Analysis and Residual Behavior of Encased Pultruded GFRP I-Beam under Fire Loading” *Sustainability*, 14, 13337. <https://doi.org/10.3390/su142013337>
18. Nawar, M.T.; Kaka, M.E.; **El-Zohairy, A.***; Elhosseiny, O.; Arafa, I.T. (2022) “Effect of Supporting Base System on the Flexural Behavior and Toughness of the Lighting GFRP Poles” *Sustainability*, 14, 12614. <https://doi.org/10.3390/su141912614>
19. Mahmood, E.M.; Allawi, A.A.; **El-Zohairy, A.*** (2022) “Flexural Performance of Encased Pultruded GFRP I-Beam with High Strength Concrete under Static Loading” *Materials Journal*, 15, 4519. <https://doi.org/10.3390/ma15134519>
20. Al-Khafaji, A., **El-Zohairy, A.***, Mustafic, M., and Salim, H. (2022) “Environmental Impact on the Behavior of CFRP Sheet Attached to Concrete” *Buildings Journal*, 12(7), 873; <https://doi.org/10.3390/buildings12070873>.
21. Al-Ahmed, A. H. A., Al-Rumaithi, A., Allawi, A. A., and **El-Zohairy, A.*** (2022). “Mesoscale Analysis of Fiber-Reinforced Concrete Beams” *Journal of Engineering Structures*, 266. <https://doi.org/10.1016/j.engstruct.2022.114575>
22. Al-Ahmed, A.H.A.; Ibrahim F.H., Allawi, A.A.; and **El-Zohairy, A.*** (2022) “Behavior of One-Way Reinforced Concrete Slabs with Polystyrene Embedded Arched Blocks” *Journal of Buildings*, 12(3), 331. <https://doi.org/10.3390/buildings12030331>
23. Ibrahim, T. H., Allawi, A. A., **El-Zohairy, A.*** (2022). “Impact behavior of Composite Reinforced Concrete Beams with Pultruded GFRP I-Beam” *Journal of Materials*, 15(2), <https://doi.org/10.3390/ma15020441>
24. **El-Zohairy, A.***, Fahad Alsharari, Hani Salim, Ibrahim T. Arafa, and Mahmoud T. Nawar (2022). Monotonic property of steel–RC composite beams strengthened with externally pre-stressed tendons. *Canadian Journal of Civil Engineering*, 49(7): 1173-1183. <https://doi.org/10.1139/cjce-2021-0237>
25. **El-Zohairy, A.***, Salim, H., and Shaaban, H. (2022). “Experimental Investigation on Fatigue Behavior of Steel-Concrete Composite Beams with Different Shear Connection Arrangements” *Journal of Structure*, 35, 146-159. <https://doi.org/10.1016/j.istruc.2021.11.005>
26. Alsharari, F.; El-Sisi, A.E.-D.; Mutnbak, M.; Salim, H.; **El-Zohairy, A.** (2022) Effect of the Progressive Failure of Shear Connectors on the Behavior of Steel-Reinforced Concrete Composite Girders. *Buildings*, 12, 596. <https://doi.org/10.3390/buildings12050596>
27. Alsharari, F.; **El-Zohairy, A.**; Salim, H.; and El-Sisi, A. (2021). “Numerical Investigation of the Monotonic Behavior of Strengthened Steel-Concrete Composite Girders” *Journal of Engineering Structures*, 246, 113081. <https://doi.org/10.1016/j.engstruct.2021.113081>
28. Nawar, M.; Arafa, I.; Elhosseiny, O.; and **El-Zohairy, A.*** (2021) “Full Static Resistance of Castellated Steel Beams with Hexagonal Web Openings for Blast Response Predictions” *Engineering Structures*. <https://doi.org/10.1016/j.engstruct.2021.112844>
29. Tran, D.; Allawi, A.A.; Albayati, A.; Cao, T.; **El-Zohairy A.***, Nguyen Y. (2021) “Recycled Aggregate for Medium Quality Concrete: Mechanical and Durability-Related Properties” *Materials*, 14, 4612. <https://doi.org/10.3390/ma14164612>.
30. Nawar, M.; Matar, E.; Maaly, H.; Alaaser, A.; and **El-Zohairy, A.*** (2021) “Assessment of Rotational Stiffness for Metallic Hinged Base Plates under Axial Loads and Moments” *Buildings*, 11(8), 368. doi.org/10.3390/buildings11080368
31. Khalaf, M.R.; Al-Ahmed, A.H.A.; Allawi, A.A.; **El-Zohairy, A.*** (2021) “Strengthening of Continuous Reinforced Concrete Deep Beams with Large Openings Using CFRP Strips” *Materials*, 14, 3119. <https://doi.org/10.3390/ma14113119>
32. Alsharari, F., **El-Zohairy, A.**, Salim, H., and El-Sisi, A. (2021). “Pre-Damage Effect on the Residual Behavior of Externally Post-tensioned Fatigued Steel-Concrete Composite Beams” *Journal of Structures*, 32C, P. 578-587. <https://doi.org/10.1016/j.istruc.2021.02.064>

33. **El-Zohairy, A.***, Hammontree, H., Oh E., and Moler, P. (2020). “Temperature Effect on the Compressive Behavior and Constitutive Model of Plain Hardened Concrete” *Journal of Materials*, 13(12). <https://doi.org/10.3390/ma13122801>.
34. **El-Zohairy, A.***, Alsharari, F., and Salim, H. (2020). “Analytical Model and Parametric Study for Static Flexural Behavior of Externally Post-tensioned Steel-RC Composite Girders” *Journal of Structures*, 27. <https://doi.org/10.1016/j.istruc.2020.05.060>.
35. **El-Zohairy, A.**, Salim, H., and Saucier, A. (2019). “Fatigue tests on steel-concrete composite beams subjected to sagging moments” *Journal of Structure Engineering*, 145(5). [https://doi.org/10.1061/\(ASCE\)ST.1943-541X.0002326](https://doi.org/10.1061/(ASCE)ST.1943-541X.0002326)
36. **El-Zohairy, A.**, Salim, H., and Saucier, A. (2019). “Steel-Concrete Composite Beams Strengthened with Externally Post-Tensioned Tendons under Fatigue” *Journal of Bridge Engineering*, 24(5). [https://doi.org/10.1061/\(ASCE\)BE.1943-5592.0001390](https://doi.org/10.1061/(ASCE)BE.1943-5592.0001390)
37. Al-Sherrawi, M., Allawi, A. A., AL-Bayati, B., Al Gharawi, M., and **El-Zohairy, A.** (2018). “Behavior of Precast Prestressed Concrete Segmental Beams” *Civil Engineering Journal*, 4 (3): 488-496. DOI: 10.28991/cej-0309109
38. **El-Zohairy, A.**, Salim, H., Shaaban, H., Mustafa, S., and Shihy, A. (2018). “FE Analysis and Parametric Study of Continuous Steel-Concrete Composite Beams Stiffened with Post-tensioned Tendons” *Journal of Advances in Structural Engineering*, 21(6): 933-945 DOI: 10.1177/1369433217732495
39. **El-Zohairy, A.**, Salim, H., Fawzy, H., Mustafa, S., and El-Shihy, A. (2017). “Experimental and FE Parametric Study on Continuous Steel-Concrete Composite Beams Strengthened with CFRP Laminates” *Journal of Construction & Building Materials*, 157: 885-898. <https://doi.org/10.1016/j.conbuildmat.2017.09.148>
40. **El-Zohairy, A.**, and Salim, H. (2017). “Parametric Study for Post-Tensioned Composite Beams with External Tendons” *Journal of Advances in Structural Engineering*, 20 (10): 1433-1450. DOI: 10.1177/1369433216684352
41. **El-Zohairy, A.**, Salim, H., Fawzy, H., Mustafa, S., and El-Shihy, A. (2015). “Finite Element Modeling of Externally Post-Tensioned Composite Beams” *Journal of Bridge Engineering (ASCE)*, 20 (12). DOI: 10.1061/(ASCE)BE.1943-5592.0000756
42. El-Shihy A. M., Fawzy H. M., Mustafa S. A. A., **El-Zohairy A. A.** (2010). “Experimental and Numerical Analysis of Composite Beams Strengthened with CFRP Laminates in Hogging Moment Region” *Journal of Steel and Composite Structures*, 10 (3): 439-453. <https://doi.org/10.12989/scs.2010.10.3.281>

Conference Proceedings

1. **El-Zohairy, A.***, Moler, P., and Nawar, T.N. (2024) “Effect of Stainless-steel Fibers on Rubberized Concrete”, Effect of Stainless-steel Fibers on Rubberized Concrete”, *2nd International Conference on Sustainability: Developments and Innovations, Prince Sultan University, Saudi Arabia, Accepted for publication.*
2. McGarry M. and **El-Zohairy, A.*** (2023). “Analytical Model and Analysis of Post-tensioned Continuous Composite Beams” *Structures Congress (ASCE), New Orleans, LA, May 3-6.* <https://doi.org/10.1061/9780784484777.009>
3. Van M. and **El-Zohairy, A.*** (2022). “Stainless Steel-Concrete Composite Beams Strengthened with External Tendons” *Structures Congress (ASCE), Atlanta, GA, April 20-23.* <https://doi.org/10.1061/9780784484180.016>

4. Alsharari, F., El-Sisi, A., **El-Zohairy, A.**, and Salim, H. (2022). "Post-tensioning Effect on Damaged Steel-Concrete Composite Beams" *Structures Congress (ASCE), Atlanta, GA, April 20-23*. <https://doi.org/10.1061/9780784484180>
5. Allawi, A.A., Said, A.I., Al-Sherrawi, M.H., Albayati, A., Al Gharawi, M., **El-Zohairy, A.** (2022). Evaluation of Live Load Distribution Factors of a Highway Bridge. In: Karkush, M.O., Choudhury, D. (eds) *Geotechnical Engineering and Sustainable Construction*. Springer, Singapore. https://doi.org/10.1007/978-981-16-6277-5_43
6. **El-Zohairy, A.***, Alsharari, F., Salim, H., Mostafa, S., and Shaaban, H. (2020). "Fatigued Composite Beam with Different Shear Connection Arrangement" *Structures Congress (ASCE), St Louis, MO, April 5-8*. <https://doi.org/10.1061/9780784482896.013>
7. Alsharari, F., **El-Zohairy, A.**, Salim, H., and Mutnbak, M. (2020). "Fatigue Testing of Post-Tensioned Steel-Concrete Composite Beams" *Structures Congress (ASCE), St Louis, MO, April 5-8*. <https://doi.org/10.1061/9780784482896.014>
8. **El-Zohairy, A.**, Salim, H., and Saucier, A. (2019). "Effect of Externally Post-Tensioned Tendons on the Fatigue Behavior of Steel-Concrete Composite Beams" *Structures Congress (ASCE), Orlando, FL, April 25-27*. <https://doi.org/10.1061/9780784482230.002>
9. **El-Zohairy, A.**, Salim, H., and Saucier, A. (2019). "Experimental Study on Fatigue Performance of Steel-concrete Composite Girders" *SEM Annual Conference, June 4-7, 2018, Greenville, SC*. DOI: [10.1007/978-3-319-95879-8_13](https://doi.org/10.1007/978-3-319-95879-8_13)
10. Al-Sherrawi, M., Allawi, A. A., AL-Bayati, B., Al Gharawi, M., and **El-Zohairy, A.*** (2019). "Experimental Investigation of Segmental Post-tensioned Girders" *SEM Annual Conference, June 4-7, 2018, Greenville, SC*. DOI: [10.1007/978-3-319-95053-2_12](https://doi.org/10.1007/978-3-319-95053-2_12)
11. Allawi, A. A., AlBayati, A., Al Gharawi, M., and **El-Zohairy, A.*** (2019). "Experimental and Numerical Evaluations of Live Load Distributions of Steel-Concrete Composite Bridge" *SEM Annual Conference, June 4-7, 2018, Greenville, SC*. DOI: [10.1007/978-3-319-95053-2_13](https://doi.org/10.1007/978-3-319-95053-2_13)
12. Allawi, A. A., Al-Sherrawi, M., Al Gharawi, M., and **El-Zohairy, A.*** (2019). "A Case Study to Evaluate Live Load Distributions for Pre-stressed RC Bridge" *SEM Annual Conference, June 4-7, 2018, Greenville, SC*. DOI: [10.1007/978-3-319-95053-2_11](https://doi.org/10.1007/978-3-319-95053-2_11)
13. **El-Zohairy, A.** and Salim, H. (2017). "Numerical Analysis of Steel-Concrete Composite Beams Strengthened with Pre-stressed CFRP Plates" *American Society for Composites (ASC) 32nd Annual Technical Conference, October 23-25*.
14. **El-Zohairy, A.**, Salim, H., Fawzy, H., Mustafa, S., and Shihy, A. (2017). "Behavior of Continuous Steel-Concrete Composite Beams Reinforced with CFRP sheets" *American Society for Composites (ASC) 32nd Annual Technical Conference, October 23-25*.
15. **El-Zohairy, A.** and Salim, H. (2017). "Behavior of Post-tensioned Steel-Concrete Composite Beams Subjected to Hogging Moments" *American Society for Composites (ASC) 32nd Annual Technical Conference, October 23-25*.
16. **El-Zohairy, A.**, and Salim, H. (2017). "Behavior of Steel-Concrete Composite Beams under Fatigue Loads" *Conference and Exposition on Experimental and Applied Mechanics, Indianapolis, IN, June 12-15*. DOI [10.1007/978-3-319-62831-8_14](https://doi.org/10.1007/978-3-319-62831-8_14)
17. **El-Zohairy, A.**, and Salim, H., Shaaban, H., Mostafa S. (2017). "Continuous Composite Beams Stiffened with CFRP Sheet at the Hogging Moment Region" *Conference and Exposition on Experimental and Applied Mechanics, Indianapolis, IN, June 12-15*. DOI [10.1007/978-3-319-63552-1_7](https://doi.org/10.1007/978-3-319-63552-1_7)

18. **El-Zohairy, A.**, and Salim, H. (2017). “Parametric Study of External Strengthening of Composite Beams using Post-Tensioned Tendons” *Structures Congress (ASCE), Denver, CO, April 6-8, 58-67.* <https://doi.org/10.1061/9780784480403.006>

Conference Presentations/Posters/Judge/Competition

1. Sanchez, M. and **El-Zohairy, A.** (2023). “Effect of Rubber on Mechanical Properties of Concrete”, Annual Research Symposium at A&M-Commerce, April 11th. (Poster)
2. Miller, J. and **El-Zohairy, A.** (2023). “Effect of Temperature and Stainless-steel Fibers on the Performance of Rubberized Concrete”, 18th Annual Pathways Student Research Symposium. *Texas A&M University-Galveston, Galveston, TX, March 2-3. (Poster)*
3. TEXO Foundation student competition, Hurst, TX, February 20, 2023. (**Team Coach**)
4. Fall 2022 ACI Previous Concrete Cylinder Competition, Dallas, TX, 10/23/2022. (**Faculty Advisor**).
5. TEXO Foundation student competition, Irving Convention Center, Irving, TX, February 21, 2022. (**Team Coach**)
6. **El-Zohairy, A.** (2022). Annual Research Symposium A&M-Commerce, Texas A&M University-Commerce, *April 19th. (Judge)*
7. Villanueva, C. and **El-Zohairy, A.** (2022). “Mechanical Properties of Concrete with Recycled Coarse Aggregate”, 17th Annual Pathways Student Research Symposium. *Texas A&M University, College Station, TX, March 3-4. (Poster)*
8. McGarry M. and **El-Zohairy, A.** (2022). “Compressive Strength of Concrete under Elevated Temperatures”, Annual Research Symposium at A&M-Commerce, *April 19th. (Poster)*
9. **El-Zohairy, A.** (2021). Virtual Federation Research Symposium. Texas A&M University-Commerce, *April 9th. (Judge)*
10. **El-Zohairy, A.** (2019). 16th Annual Pathways Student Research Symposium. *Texas A&M International University, Laredo, TX, November 7-8. (Judge)*
11. **El-Zohairy, A.**, and Salim, H. (2017). “Steel-Concrete Composite Beams Subjected to Fatigue Loads” *Diverse Engineering Professionals Conference, Columbia, MO, October 7. (Poster)*
12. **El-Zohairy, A.**, and Salim, H. (2015). “Fatigue Analysis of Composite Beams Strengthened with Externally Post-Tensioned Tendons” *Mid-Continent Transportation Research Symposium, Ames, IA, August 19–20 (poster).*
13. **El-Zohairy, A.**, and Salim, H. (2015). “Analysis of Composite Beams Strengthened with Externally Post-tensioned Tendons” *1st Annual Missouri Bridge Conference, Columbia, MO, April 9 (poster).*

Manuscripts in Progress

1. **El-Zohairy, A.***, Salim, H., and Shaaban, H. (2024). “Fatigue Property of Steel-Concrete Composite Beams under Sagging Moments”. The 16th World Congress on Computational Mechanics, 21-26th July 2024 in Vancouver, Canada, **Submitted and under review.**
2. Muataz I. Ali, Abbas A. Allawi, and **El-Zohairy, A.*** (2024) “Flexural Behavior of Pultruded GFRP-Concrete Composite Beams Strengthened with GFRP Stiffeners”. *Fibers*, **Submitted and under review.**
3. Tahoona, D., Mohamed, H.I., and **El-Zohairy, A.** (2024) “Cost impact comparative analysis via BIM between heritage long-term restoration projects and regular maintenance projects”. **Submitted and under review.**
4. Walid. Fouad Edris, Samy Elbially, **El-Zohairy, A.***, Ashraf Mohamed Soliman, Shymaa M.M. Shawky, Tarek Ibrahim Selouma, Abd Al-Kader A. Al Sayed (2024) “Comparative Analysis of the

Mechanical Properties of Concretes Incorporating Natural and Synthetic Fibers”. Developments in the Built Environment, **Submitted and under review.**

5. **El-Zohairy, A.**, and Salim, H. (2024). “Finite Element Simulation of Fatigue Damage in the Concrete Deck of Steel-Concrete Composite Beams”. *In progress.*
6. **El-Zohairy, A.** and Mathew Sanchez (2024) “Recycled Concrete Aggregate for Medium-Quality Structural Concrete Strengthened with Stainless Steel and Carbon Fibers”. *In progress.*
7. **El-Zohairy, A.***, Moler, P., and Ford, R. (2024). “Evaluation of the Mechanical Properties of Concrete with Straw and Straw Ash”. *In progress.*
8. Alsharari, F., **El-Zohairy, A.**, and Salim, H. (2024). “Post-Tensioning Effect on Fatigue Behavior of Damaged Steel-Concrete Composite Beams”. *In progress.*

PROPOSALS/GRANTS

- 1- *(PI) Evaluation of the Mechanical Properties of Concrete with Straw and Straw Ash, Texas A&M University-Commerce Undergraduate Grant Program – 11/2023 (\$500) (granted).*
- 2- *(PI) Developing a Performance-Based Concrete Overlay Mix Design for Improved Resistance to Early-Age Cracking and Increased Durability, Texas Department of Transportation (TxDOT) - 03/6/2023 (\$297,914) (Not selected).*
- 3- *(PI) Evaluation of Nanomaterials in Concrete for Improved Strength, Texas A&M University-Commerce Undergraduate Grant Program – 10/2022 (\$500) (granted).*
- 4- *(PI) Evaluate Nanomaterials in Concrete for Improved Durability, Texas Department of Transportation (TxDOT) - 03/8/2022 (\$357,518) (NOT selected).*
- 5- *(Co-PI) MRI: Acquisition of a desktop scanning electron microscope (SEM) for research and education in STEM fields at a primarily undergraduate institution, National Science Foundation NSF – 01/18/2022 (\$144,300) (granted).*
- 6- *(PI) Mechanical Properties of Recycled Concrete Aggregate for Medium-Quality Structural Concrete, Texas A&M University-Commerce Undergraduate Grant Program – 11/2021 (\$500) (granted).*
- 7- *(PI) Smart Health Monitoring Technique for Texas Pipeline System under Soil Movement and Natural Disasters, 2021 Virtual TEES Annual Research Conference – 05/18/2021 (\$5000) (granted).*
- 8- *(PI) Investigate Live Load Distribution and Stability of Prestressed Concrete Girders during Construction, Texas Department of Transportation (TxDOT) - 03/10/2021 (\$45,000) (NOT selected).*
- 9- *(PI) Mechanical Properties of Rubberized Concrete under Various Environmental Effects, Texas A&M University-Commerce Undergraduate Grant Program – 11/2020 (\$500) (granted).*

RESEARCH PROJECTS

- 1- *Evaluation of the Mechanical Properties of Concrete with Straw and Straw Ash. Engineering and Technology Department, Texas A&M University-Commerce, Commerce, TX, USA. Sponsored by Undergraduate Grant Program, Texas A&M University-Commerce. 11/2023 – present*
- 2- *Mechanical Properties of Recycled Concrete Aggregate for Medium-Quality Structural Concrete.*

Engineering and Technology Department, Texas A&M University-Commerce, Commerce, TX, USA.
Sponsored by Undergraduate Grant Program, Texas A&M University-Commerce. 11/2021 – present

3- Analytical and FE Modeling of Steel-Concrete Composite Beams at the Sagging and Hogging Moment Regions. Engineering and Technology Department, Texas A&M University-Commerce, Commerce, TX, USA. *Sponsored by Texas A&M University-Commerce.* 11/2019 – 06/2022

4- Rubberized High Strength Concrete (HSC) Strengthen with Stainless Steel Fibers. Engineering and Technology Department, Texas A&M University-Commerce, Commerce, TX, USA. *Sponsored by Undergraduate Grant Program, Texas A&M University-Commerce.* 10/2020 – 05/2021

5- The Influence of Temperature on the Characteristic Compressive Strength and Constitutive Model of Plain Hardened Concrete. 11/2019 – 06/2020

Engineering and Technology Department, Texas A&M University-Commerce, Commerce, TX, USA. *Sponsored by Texas A&M University-Commerce.*

6- Effect of External Post-Tensioning on Fatigue Life of Shear Connectors in Steel-Concrete Composite Beams 03/2014 – 05/2021

Civil and Environmental Engineering Department, University of Missouri, Columbia, MO, USA. *Sponsored by the Egyptian Cultural and Educational Bureau, DeLong's Inc., and Coreslab Structures Inc.*

7- Experimental Investigation of Precast Prestressed Reinforced Concrete Segmental Beams

Civil Engineering Department, University of Baghdad, Baghdad, Iraq. *Sponsored by the University of Baghdad and Hammurabi Contracting Company.* 03/2015 – 10/2017

8- Strengthening of Steel-Concrete Composite Beams with CFRP Laminates at Hogging Moment Regions 04/2008 – 03/2009

Department of Structural Engineering, Zagazig University, Zagazig, Egypt. *Sponsored by Zagazig University and Sika Egypt.*

REVIEWER ACTIVITIES

- 1- 2023 NSF Engineering CAREER Workshop Mock Panel Session - Tuesday, May 9th, 2023
- 2- **Guest Editor of Special Issue** "Application of Recycled Concrete in Construction Engineering and Technologies" Buildings Journal, 12/2022 – 12/2023.
- 3- **Guest Editor of Special Issue** "Modeling and Testing of Reinforced Concrete or Composite Structures Using Advanced New Materials" Materials Journal, 11/2021 – 03/2023.
- 4- **Topical Advisory Panel Member of Materials Journal** (<https://www.mdpi.com/journal/materials>).
- 5- **Ad hoc reviewer** for Elsevier, ASCE, Taylor & Francis, ACI, etc.:
 - MDPI journals (*Applied Sciences Journal, Materials Journal, Buildings Journal, Fibers Journal, Metals Journal, Symmetry Journal*);
 - Elsevier journals (*Construction and Building Materials, Engineering Structures, Thin-Walled Structures, Structures*);
 - Sage journals (*Advances in Structural Engineering*);
 - International journals (*Journal of King Saud University, Engineering Science and Technology, Journal of Materials Engineering and Performance, Structure and Infrastructure Engineering, Materials Research Express, Advances in Civil Engineering*).

TEACHING EXPERIENCE

Texas A&M University-Commerce, Commerce, TX, USA

Department of Engineering & Technology

Assistant Professor:

- 1- CONE 413 - Design & Const of Steel
- 2- CONE 414 - Design & Const of Concrete
- 3- CONE 331 - Mechanics of Materials
- 4- CONE 332 - Structural Analysis and Design
- 5- CONE 341 - Engineering Hydrology and Hydraulic
- 6- CONE 351 - Surveying for Construction
- 7- CONE 322 – Construction Planning and Scheduling
- 8- CONE 221 - Building Construction
- 9- CONE 321 - Construction Estimating
- 10- CONE 489 - Research in Construction Engineering
- 11- ENGR 2303 - Engineering Mechanics
- 12- ENGR 1304 - Computer-Aided Design (CAD)

University of Missouri, Columbia, MO, USA

Civil and Environmental Engineering Department

Adjunct Instructor:

- 1- CV_ENG 3300 - Structural Analysis I. (Fall 2018)

Teaching Assistant:

- 2- ENGR 1200 - Statics and Elementary Strength of Materials (online course). (Falls, Springs, and Summers of 2015-2018)
- 3- ENGR 2200 - Intermediate Strength of Materials. (Fall 2015, Springs of 2016 and 2018, and Summer 2018)

Zagazig University, Zagazig, Egypt

Department of Structural Engineering

Lecturer:

1. Computer-Aided Design of Structures.
2. High Rise Buildings Design.
3. Earthquake engineering.
4. Structure Analysis Program (SAP2000)
5. Computer-Aided Design (CAD)

Teaching Assistant:

1. Theory of Structures I, II, and III. (Falls of 2007-2012)
2. Structural Mechanics I, II. (Springs of 2006-2013)
3. Plates and Shells. (Springs of 2006-2013)

4. Matrix Methods of Structural Analysis. (Falls of 2007-2012)

TEACHING EVALUATIONS

➤ Comparative Analysis - Score Table

Semester		Instructor	Dept. (Engineering & Technology)	School (Science & Engineering)	University
Spring 2019	Instructor questions	4.78	4.47	4.39	4.42
	Course Questions	4.70	4.45	4.38	4.42
	QEP Questions	4.63	4.21	4.01	4.20
Fall 2019	Instructor questions	4.88	4.40	4.37	4.41
	Course Questions	4.80	4.31	4.34	4.40
	QEP Questions	4.59	4.18	3.96	4.18
Spring 2020	No course evaluations due to Covid-19				
Fall 2020	Instructor questions	4.74	4.43	4.32	4.42
	Course Questions	4.75	4.44	4.34	4.42
	QEP Questions	4.41	4.26	4.01	4.23
Spring 2021	Instructor questions	4.63	4.48	4.29	4.36
	Course Questions	4.65	4.57	4.37	4.44
	QEP Questions	4.62	4.34	4.06	4.25
Fall 2021	Instructor questions	4.66	4.53	4.31	4.35
	Course Questions	4.77	4.56	4.38	4.41
	QEP Questions	4.56	4.34	4.04	4.21
Spring 2022	Instructor questions	4.90	4.59	4.43	4.42
	Course Questions	4.91	4.67	4.49	4.47
	QEP Questions	4.75	4.45	4.17	4.29
Fall 2022	Instructor questions	4.73	4.58	4.41	4.42
	Course Questions	4.76	4.60	4.47	4.47
	QEP Questions	4.51	4.40	4.16	4.28
Spring 2023	Instructor questions	4.72	4.50	4.38	4.41
	Course Questions	4.74	4.51	4.44	4.46
	QEP Questions	4.48	4.26	4.17	4.29

TRAINING IN TEACHING

Texas A&M University-Commerce, Commerce, TX, USA

- 1- ACUE Course for Effective Online Teaching Practices (2023-2024): Enrollment Confirmed and in progress.

- 2- ACUE's Course in Effective Teaching Practices (2021-2022)
 - ACUE's Course in Effective Teaching Practices is the first course designed for higher education faculty members that leads to a nationally-recognized Certificate in Effective College Instruction endorsed by the American Council on Education (ACE).

University of Missouri, Columbia, MO, USA

- 1- Orientation for New International Teaching Assistants (ONITA). (Fall 2015)
- 2- Teaching for Learning Workshop (Spring 2017)
- 3- 2nd Annual Teaching Renewal Week (Spring 2017):
Intentional Syllabus - Engagement - Dealing with Distracted Students - Defining and Preventing Plagiarism/Cheating - Grading/ Assessment.

Zagazig University, Egypt

A program for teaching training as a requirement for the Assistant Lecturer position. The program titled “*Skills Development of Teaching Staff and their Assistants*” offered by *Faculty and Leadership Development Center (FLDC): Zagazig University*. The program includes these courses:

1. Using technology in teaching
2. Ethics of scientific research
3. International publication of papers
4. Effective communication skills
5. Testing systems and students’ evaluation

UNIVERSITY SERVICE

✓ **ADVISING STUDENTS**

- 1- **Faculty advisor:** In this role, I am advising CONE students and helping them with Classes Registration and reviewing the Graduation Checklist.

✓ **COMMITTEES**

- 1- **Search Committee Member** (2022-2023): In this role, I am a member in the search committee for the position of Tenure-Track Assistant Professor of Construction Engineering.
- 2- **Search Committee Chair** (2020-2022): In this role, I am the chair of the search committee for the Tenure-Track Assistant Professor of Construction Engineering position.
- 3- **Scholarship committee member:** In this role, I am serving in the scholarship committee as a member to review and evaluate applicants in the Scholarship Portal.
- 4- **Faculty Development Leave Committee member:** In this role, I am serving in the Faculty Development Leave Committee as a member to review and evaluate the applications of the faculty.
- 5- **Department curriculum committee:** In this role, we are discussing the department minors and any other curriculum changes.

- 6- **ABET Preparation:** In this role, I participated in preparation for the ABET visit in Fall 2023. I prepared the Student Learning Outcomes (SLOs) for my courses as well as the other required documents.

✓ ***ORGANIZATIONS AND COMPETITIONS***

- 1- **Student Organization Advisor:** In this role, I am serving as the advisor for the Student Construction Association.

COMMUNITY SERVICE

1- Member of the Construction Committee at McKinney Islamic Association

As a Professional Engineer (PE), I am volunteering to review the architectural and structural designs of the new McKinney Masjid, McKinney, TX.