

Saher Attia, *Ph.D.*

Assistant Professor
Structural Engineering Department
Cairo University



Personal Information

- **Birth date** 1st October 1992
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Education

- **2021** Ph.D., Structural Engineering, University of Alberta, Alberta, Canada.
Thesis title: Thin Shell Finite Element Formulations for Geometrically Non-Linear Analysis of Straight and Curved Pipes
- **2017** M.Sc., Structural Engineering, Cairo University, Cairo, Egypt
Thesis title: "Effect of Elevated Temperature on Physical & Mechanical Properties of Expanded Polystyrene Light Weight Concrete "
- **2014** B.Sc. Civil Engineering, Cairo University, Cairo, Egypt.
Cumulative grade: Distinction with honor rank (92%)
Ranked 4th out of 450 students
Structural Analysis Graduation Project (Grade: distinction)
Ranked 1st out of 35 students.
Graduation project title: "Developing FORTRAN Software to Analyze Post Tensioned Slabs using the Boundary Element Method"

Experience

- 2018- 2021 Teaching and Research assistant, University of Alberta, Canada.
(CIV E 295 & CIV E 270 & CIV E 398)
- 2018-2017 Teaching and Research assistant, Cairo University, Egypt.
(STRN 101 & STRN 104 & STRN 305)
- 2017-2016 Teaching assistant, Al-Ahram Canadian University, Egypt.
(CBE 202 & CBE 301 & CBE 306)
- 2016 Teaching assistant, the American University in Cairo, Egypt.
(CENG 4158 & ENGR 2102 & ENGR 2122)
- 2016 -2015 Structural engineer at the Egyptian Forced Army "*Military Service*"
- 2015- 2014 Teaching assistant, Cairo University (STR N101)
- 2015- 2014 Design structural engineer at ACE (MOHARRAM –BAKHOUM)
" **Part time** "

Skills

- **Computer**
 - FORTRAN
 - MATLAB

- MATHEMATICA
- SAP2000(Finite Element Software)
- ABAQUS (Finite Element Software)
- PLPAK (Boundary Element Software)

Awards

- 2019 Best oral presentation in 5th annual structures graduate students conference
- 2018 University of Alberta Doctoral Recruitment Scholarship
- 2018 Civil and Environmental Engineering Scholarship "University of Alberta"
- 2014 Full tuition scholarship for the M.Sc. study "Cairo University "
- 2014 Best Graduation Project Shield " Egypt cabinet of ministers "
- 2014 Certificate of Appreciation "Egypt Syndicate of Engineers"
- 2013-2010 Excellence award (4 times)"Faculty of Engineering -Cairo University"

Research Publications

- "Shell Finite Element Formulation for Geometrically Nonlinear analysis of Curved Thin-Walled Pipes". Thin-Walled Structures, April 2022, 108971
<https://doi.org/10.1016/j.tws.2022.108971>
- "Shell Finite Element Formulation for Geometrically Nonlinear analysis of Straight Thin-Walled Pipes". International Journal of Nonlinear Mechanics, Dec 2021, 103829
<https://doi.org/10.1016/j.ijnonlinmec.2021.103829>
- "Numerical Assessment of Elbow Element Response under Internal Pressure". Journal of Pressure Vessel Technology, Oct 2021; 142(5): 051302. <https://doi.org/10.1115/1.4050091>
- "Two-Dimensional Geometrically Nonlinear Finite Element Formulation for Analysis of Straight Pipes" Proceedings of the Pressure Vessels & Piping Conference, Minneapolis, United States, August 2020. <https://doi.org/10.1115/PVP2020-21275>

Research Interests

- Solid Mechanics.
- Numerical Analysis techniques (e.g., Finite Element Method).
- Structural Analysis.
- Dynamics

Teaching Interests

Mr. Attia believes that the best way for learning is teaching. Students are the central axis of his teaching philosophy which depends on skills-based learning approach unlike knowledge-based ones. He also believes that teaching is an opportunity to exchange expertise, skills, and ideas between different generations and spend nice times.

References are available on request.