



Essam Abd ELaty Mohamed Amoush
Professor of Steel Structures
Civil Engineer Department
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Profile

Essam A. Amoush is professor of steel structures at the Civil Engineering Department, Higher Technological Institute, Egypt. Amoush has both academic and industrial experiences in the field of steel structural engineering. His current research projects, cold-formed steel members, Built-up steel members, strengthening of CFS members, and stability of steel structures.

Academic History

- Professor of Steel Structures at Higher Technological Institute
Department of Civil Engineering (10TH of Ramadan City), 2023.
- 2010 Ph.D. Degree, Ain Shams University, Egypt, Subject of the Ph.D. Research: "Strength Of Bi-Axially Loaded Battened Beam Columns Composed Of Slender Angle Sections "
- 2003 M.Sc. Degree, Tanta University, Egypt. Subject of the M.Sc. Research: "Moment-Rotation for Base Connection with Different Detail Configurations"
- 1996 B. Sc. Degree Tanta University, Egypt.

Employment History

- ❖ In the period between October 1998 - May 2004: working as a third specialist engineer, doing the work of a teaching assistant in the Civil Engineering Department (structural) at the Higher Technological Institute in the Tenth of Ramadan and participating in teaching scientific subjects (metal structures - concrete structures -

construction theory - drawing engineering - diploma project)

- ❖ In the period between May 2004 - May 2011: working as an assistant teacher in the Department of Civil Engineering (structural) at the Higher Technological Institute in the Tenth of Ramadan and participating in teaching scientific subjects (metal structures - concrete structures - construction theory - engineering drawing - diploma project)
- ❖ From May 2011-October 2017: Working as a teacher for scientific courses (metallic structures - engineering drawing - AutoCAD diploma project) in the Civil Engineering (structural) department at the Higher Technological Institute in the tenth of Ramadan.
- ❖ From October 2017- January 2023: Working as an Assistant Professor of Metallurgical Structures in Structural Engineering, Department of Civil Engineering, Higher Technological Institute, Tenth of Ramadan.
- ❖ From January 2023 - until now: working as a professor of metal structures in structural engineering at the Civil Engineering Department at the Higher Technological Institute in the Tenth of Ramadan.
- ❖ 2023/2024 academic year: Vice-Dean of The Institute For Community Service and Environmental Development
- ❖ 2023/2024 academic year: Supervisor and Chairman of the Council of the Electrical Engineering Department

Partial Recruitment in other institutes

- ❖ Partial recruitment at the Higher Valley Institute for Engineering and Technology in Qalyubia during the academic semester January-May for the academic year 2014/2015.
- ❖ Partial recruitment at the Higher Institute of Engineering and Technology in Zagazig during the January-May academic year 2015/2016.
- ❖ Partial recruitment at the Higher Institute of Engineering in Belbeis during the academic year 2016/2017.
- ❖ Partial recruitment at the Higher Institute of Engineering in Belbeis during the academic year 2017/2018.
- ❖ Partial recruitment at the Higher Institute of Engineering in Belbeis during the academic year 2018/2019.
- ❖ Partial recruitment at the Higher Institute of Engineering in Belbeis during the academic year 2019/2020.

- ❖ Partial recruitment at the Higher Institute of Engineering in Belbeis during the academic year 2020/2021.

Various activities

- ❖ Attending the Egyptian-American workshop on "The Use of Light Steel Structures in Residential Buildings" held during the period from 9-10 December 2012 at the Faculty of Engineering - Cairo University.
- ❖ Member of the Egyptian Association of Steel Structures
- ❖ Participation in the Engineering Consultancy Unit of the Civil Engineering Department at the Higher Technological Institute in the Tenth of Ramadan
- ❖ Participation in the development of curricula and teaching regulations at the Higher Technological Institute in the tenth of Ramadan
- ❖ Participation in the development of laboratories of the Department of Civil Engineering at the Higher Technological Institute in the Tenth of Ramadan
- ❖ Courses of How to use A 3D printer (certificate)
- ❖ Diploma in Ship construction
- ❖ Reviewer in international Journals and conferences
- ❖ Work as a manager of engineering office from 1998 to 2023 and design many of concrete buildings and steel structures buildings.

Quality courses

- ❖ Examination systems and student evaluation 2-2020 (The National Authority for Education Quality Assurance)
- ❖ Teaching and learning strategies, 12-2021-(The National Authority for Education Quality Assurance)
- ❖ Fundraising skills and best practices, 21-11-2021- (German Academic Exchange Service) (DAAD)
- ❖ Constructive assessment of learning, 1-12-2021 - (German Academic Exchange Service) (DAAD)

Research published in scientific journals and conferences

- ✓ F .A .Zaher, M.A .Dabaon, and E. Amoush .“Moment-Rotation Relationship for Base Connections with Different Detail Configuration" Ain-Shams University, Faculty of Engineering, Scientific Bulletin, Vol.39, No.3, September 30, 2004.
- ✓ A. H .SALEM, M .EL AGHOURY, M .T .HANNA, E. A. AMOUSH "Imperfections in Battened Columns Composed of

Four Equal Cold Formed Angles" 13th ICSGE, 27-29 Dec . 2009, Cairo- Egypt.

- ✓ M. A. El Aghoury , A. H. Salem , M.T. Hanna , E.A. Amoush, "Experimental investigation for the behaviour of battened beam-columns composed of four equal slender angles" Thin-Walled Structures 48 (2010) 669–683.
- ✓ H .SALEM, M .EL AGHOURY, M .T .HANNA, E. A. AMOUSH . "Tests on Battened Beam-Columns Composed of Four Equal Slender Angles subjected to Eccentric Compression Force" American society of civil engineers, 6th International Engineering and Construction Conference IECC'6, Cairo, Egypt, June 28-30, 2010.
- ✓ El Aghoury, M.A., Salem, A.H., Hanna, M.T., Amoush, E.A., "Computed strength of uni-axially loaded battened columns composed of four cold formed angles" Structural Stability Research Council Annual Stability Conference 2012 , pp. 387-398.
- ✓ El Aghoury, M.A., Salem, A.H., Hanna, M.T., Amoush, E.A., "Ultimate capacity of battened columns composed of four equal slender angles" Thin-Walled Structures 63(2013), pp. 175-185
- ✓ Mohamed A. El Aghoury, Maged T. Hanna, Essam A. Amoush "Effect of initial imperfections on axial strength of cold-formed steel single lipped sigma section" September 10-12, 2014, EUROSTEEL 2014, Naples, Italy
- ✓ M.A. El Aghoury, A.H. Salem, M.T. Hanna, E.A. Amoush "Strength of cold formed battened columns subjected to eccentric axial compressive force" Journal of Constructional Steel Research 113 (2015) 58–70
- ✓ Essam A. Amoush "Strength of cold formed steel profiles subjected to compression and bending" December 20th-22th, 2015, ICSGE14, 14th International conference on structural & Geotechnical Engineering, Cairo, Egypt
- ✓ Essam A. Amoush "Numerical investigations of cold-formed trapezoidal steel cross-sections (DELTABEAMS)" December 20th-22th, 2015, ICSGE14, 14th International conference on structural & Geotechnical Engineering, Cairo, Egypt
- ✓ M. El Aghoury, E. A. Amoush, M. S. Soliman "Behaviour of Bolted Moment Connections for Cold-Formed Steel Frames" Al-Azhar University- CERM Vol (38) No. (2) April 2016
- ✓ M. El Aghoury, E. A. Amoush, A. M. Elghorab "Stiffness of bolted K joint in cold-formed steel trusses " Al-Azhar University- CERM Vol (38) No. (2) April 2016

- ✓ Mohamed A. El Aghoury, Maged T. Hanna, Essam A. Amoush "Axial stability of columns composed of combined sigma CFS" SSRC, Proceedings of the Annual Stability Conference Structural Stability Research Council Orlando, Florida, April 12-15, 2016.
- ✓ Mohamed A. El Aghoury, Essam A. Amoush, Amr M. El Hady, "Strength of Cold-Formed Steel Frame Base Connections" SSDS 2016, The International Colloquium on Stability and Ductility of Steel Structures, Timisoara, Romania, 30 May-01 June 2016
- ✓ Mohamed A. El Aghoury, Essam A. Amoush, Ihab M. El Aghoury, Mohamed A. Ghanem, "Strength of square laced steel-concrete composite columns using GFRP and silica fume" SSDS 2016, The International Colloquium on Stability and Ductility of Steel Structures, Timisoara, Romania, 30 May-01 June 2016
- ✓ Mohamed A. El Aghoury, Maged T. Hanna, Essam A. Amoush "Experimental and theoretical investigation of cold-formed single lipped sigma columns" thin-walled structures, 2017.
- ✓ M. El. Aghoury, M.T. Hanna, E.A. Amoush "Strength of combined sigma cold formed section columns" EUROSTEEL 2017, September 13–15, 2017, Copenhagen, Denmark, © Ernst & Sohn Verlag für Architektur und technische Wissenschaften GmbH & Co. KG, Berlin ·CE/papers (2017).
- ✓ Essam A. Amoush, Mohamed A. Ghanem "Axially loaded capacity of alternatively strengthened cold-formed channel columns with CFRP" Journal of Constructional Steel Research 140 (2018) 139–152.
- ✓ Essam A. Amoush "Strength of eccentric axially loaded cold-formed u-shape Columns" International Conference on Engineering Research and Practice for Steel Construction 2018 (ICSC2018) Hong Kong, China, 5 to 7 September 2018.
- ✓ Essam Abd Elaty Amoush "Behaviour of built-up laced columns composed of Double cold-formed channels" Fifteenth International Conference on Structural and Geotechnical Engineering, Advancements in Construction Techniques, ICSGE 15, 18-20, December 2018.
- ✓ Mohamed El Aghoury, Essam Amoush, Amr El Hady " Behavior of base connections in cold-formed steel frames" Fifteenth International Conference on Structural and

Geotechnical Engineering, Advancements in Construction Techniques, ICSGE 15, 18-20, December 2018.

- ✓ Essam A. Amoush "Experimental study of composite cold-formed Trapezoidal steel beams" International conference on Advances in Steel Structures Egypt Steel 19(ES19).
- ✓ M.A. El Aghoury, E.A. Amoush, A.M. El Hady, S.M. Ibrahim " Numerical investigation of steel Built-up Columns Composed of Track and Channel Cold-Formed Sections" Stability and Ductility of Steel Structures 2019 – Wald & Jandera (Eds)© 2019 Czech Technical University in Prague, Czech Republic, ISBN 978-0-367-33503-8
- ✓ Mohamed A. El Aghoury, Maged T. Hanna, Essam A. Amoush "Compressive Strength of Axially Loaded Built-up Sigma Cold Formed Sections Columns" Future Engineering Journal, Vol. 1, Iss. 1 [2020], Art. 2.
- ✓ Mohamed El Aghour, Essam Amoush, Mohamed Soliman, "Numerical Study of Bolted Moment Connections in Cold-Formed Steel Frames" Future Engineering Journal, Vol. 1, Iss. 1 [2020], Art. 3.
- ✓ M.T.Hanna, Mohamed Massoud, E.A.Amoush "Strength of cold formed sections subjected to axial compressive force and bending moments" Proceedings of the Annual Stability Conference Structural Stability Research Council Atlanta, Georgia, April 21-24, 2020.
- ✓ A.M. El Hady, M.A. El Aghoury, S.M. Ibrahim, E.A. Amoush "Experimental investigation of steel built-up beam-columns composed of tracks and channels cold-formed sections" Journal of Building Engineering 51 (2022) 104295.
- ✓ Essam A Amoush "Experimental investigation of the axial behaviour for battened Tubular columns" 2022 14th International Conference on Civil and Architecture Engineering (ICCAE). IOP Conf. Series: Earth and Environmental Science 1056(2022) 012036.
- ✓ Mohammed M. Attia, Mahmoud Malek Olwan, Essam Amoush, Shady Rizk Ragheb Hassan Aamer, M.A. Eita "Behavior of hybrid natural fiber reinforced polymers bars under uniaxial tensile strength and pull-out loads with UHPC "Case Studies in Construction Materials, Volume 21, December 2024, e03442

Additional Skills

- ✓ Languages:
Native language (Arabic) – Second language: English

- ✓ Computer Skills:
- ✓ Drawing Programs:
AUTOCAD- TEKLA-REVIT-ADVANCED STEEL
- ✓ Finite Element Programs:
ANSYS - SAP2000 – ETABS- SAFE- STAAD – GTS NX)