Curriculum Vitae

Sameh Youssef Mahfouz Yassin
Assoc. Professor of Steel Structures
Head of Construction and Building Engineering Dept.
President Assistant for Engineering Affairs
Arab Academy for Science, Technology and Maritime Transport.

1. Qualifications

- B.Sc.: Civil Engineering Department (Major: Structural Engineering), **MTC**, Cairo, Egypt, 1988, Excellent with Distinction.
- M.Sc.: Civil Engineering Department (Major: Structural Engineering), **MTC**, Cairo, Egypt, 1993.
- Ph.D.: Civil and Environmental Engineering Department, Bradford University, UK, (www.brad.ac.uk/staff/vtoropov/burgeon/), 1999

2. Career

- Assistant Lecturer: Civil Engineering Department, MTC, Cairo, Egypt, 1989-1993.
- Assistant Lecturer: Civil and Environmental Engineering Department, Bradford University, UK, 1996-1999 (Part Time).
- Lecturer: Civil Engineering Department, MTC, Cairo, Egypt, 1999-2005.
- Associate Professor: Civil Engineering Department, MTC, Cairo, Egypt, 2005-2013.
- Visiting Professor: Civil and Environmental Engineering, College of Engineering, Florid A&M University - Florida State University Civil, USA, Jan-July 2008
- Head of Construction and Building Engineering Dept., Arab Academy for Science and Technology and Maritime Transport (AASTMT), 2014-2019
- Head of Consultant Engineering Center of Arab Academy for Science and Technology and Maritime Transport (AASTMT) – Smart Village, 2015- Present
- Vise Dean of Maritime Research and Consultation Center, AASTMT 2017-Present
- President Assistant for Engineering Affairs of Arab Academy for Science and Technology and Maritime Transport (AASTMT), 2019- Present.

3. Other

- Member of the Egyptian Committee for the Preparation of the Egyptian Code of Practice for Steel Structures and Bridges (2006-present).
- Member of the American Society for Civil Engineers (ASCE) (2000-present)
- Member of the Association for Structural and Multidisciplinary Optimization in the UK (ASMO-UK) (1999-present)
- Advisory Member of Bradford University Research Group (1999-present)
- Member of the Egyptian Engineers Syndicate (1988-Present)

4. Fields of Research Interests

- Structural Analysis
- Optimization Methods
- Structural and Design Optimization of Reinforced and Steel Structures
- Construction Material
- Construction Methods
- Construction Project Management
- Structural Health Monitoring
- Composite Structures
- Naval Architecture and Marine Structures

5. Teaching Activities

- Undergraduate Courses (1999-Present): More than 20 courses
- Postgraduate Courses (1999-Present) : More than 14 courses

6. Theses Supervised: More than 25 MSc. and Ph.D.

7. Published papers: More than 30 research technical paper

- Mahfouz, S.Y., Salem, A.H. and Raslan, M.S. (1994), "Best location of stiff elements in multi-bay frameworks for maximum buckling strength", Annual Conference of the Canadian Society for Civil Engineering, Winnipeg, Manitoba, Canada, P. 512-541.

- Mahfouz, S.Y., Salem, A.H. and Raslan, M.S. (1994), "Optimum location and proportioning of stiff elements in multistory frameworks for maximum buckling strength", Second Alexandria Conference on Structural and Geotechnical Engineering, pp. 611-626.

- Mahfouz, S.Y., Toropov, V.V. and Westbrook, R.K. (1998), "Improvements in the performance of a genetic algorithm: application to steelwork optimum design", Proceedings of 7th AIAA /USAF/NASA/ISSMO Symposium on Multidisciplinary Analysis and Optimization, pp. 2037-2045.

- Mahfouz, S.Y., Toropov, V.V. and Westbrook, R.K. (1998), "Optimum design of steelwork using a genetic algorithm", In: Parmee, I. (ed.), Poster Proceedings of Adaptive Computing in Design and Manufacture, pp. 13-16.

- Mahfouz, S.Y., Toropov, V.V. and Westbrook, R.K. (1999), "Modification, tuning and testing of a GA for structural optimization problems", In: Toropov, V. (ed.), Proceedings of 1st AMSO UK/ISSMO Conference on Engineering Design Optimization, pp. 271-278.

- Toropov, V.V., Mahfouz, S.Y. and Westbrook, R.K. (1999), "Discrete design optimization of 3-dimensional steel structures using a genetic algorithm", 3rd World Congress of Structural and Multidisciplinary Optimization, Buffalo, NY, USA, May.

- Toropov, V.V. and Mahfouz, S.Y., 2001, "Design optimization of structural steelwork using a genetic algorithm, FEM and a system of design rules, Eng. Compu., 437-460(24).

- Shawky, K., Mahfouz, S.Y. and Abdel A. Z. (2001) "Structural optimisation technique based on a modified genetic algorithm " 4th Alexandria International conference on Structural and Geotechnical Engineering, Alexandria, Egypt, pp.

- Mahfouz, S. Y. and Toropov, V.V. (2001), "Anti-Optimisation problems arising in optimisation of structural steelwork " 9th International Conference on Aerospace sciences and Aviation Technology, MTC , Cairo, Egypt.

- Mahfouz, S.Y. (2002) " Validation of 3D modeling of a steel portal structure using a modified genetic algorithm " 14th U S National Congress of Theoretical and Applied Mechanics, Virginia , USA.

- Mahfouz, S.Y. and Alqedra, M. (2002) "Parameter identification using parallel genetic algorithm" 4th International Conference on Civil and Architecture Engineering, MTC, Cairo, Egypt.

- Mahfouz, S.Y. (2002) "Maximization of the ratio of the effective buckling length Evaluated by FEM and BS5950" 4th International Conference on Civil and Architecture Engineering, MTC, Cairo, Egypt.

- Mahfouz, S.Y. (2003) "The use of genetic algorithm for validation of 3D simplified model of a steel clad structure", 10th International Colloquium on Structural and Geotechnical Engineering, Ain-shams university, Cairo, Egypt.

- Mahfouz, S.Y. (2003) "Topology optimisation of trusses using modified genetic algorithm", 10th International Colloquium on Structural and Geotechnical Engineering, Ain-shams university, Cairo, Egypt.

- Mahfouz, S.Y. and Raslan, M. S. (2004), "Structural shape optimization using modified genetic algorithms " 5th International Conference on Civil and Architecture Engineering, MTC, Cairo, Egypt.

- Mahfouz, S. Y. and Seleem, M. A. (2006),"Combined genetic and sequential quadratic programming algorithms for vibration- based structural health monitoring " 6th International Conference on Civil and Architecture Engineering, MTC, Cairo, Egypt.

- Mahfouz, S.Y. (2007)" Shape optimization of shell structures", 12th International Conference on Aerospace sciences and Aviation Technology, MTC, Cairo, Egypt.

- Mahfouz, S.Y., Toropov, V and Tawfeek, K. (2008)" Design optimization of deployable steel bridges", Proceedings of 5th AMSO UK/ISSMO Conference on Engineering Design Optimization, **2008.**

- Fadel, Z., , Salem, A. H., Abdel Wahab, M and Mahfouz, S.Y. (2010), "Economic design of multi-bay steel frames taking into consideration different bracing systems ", " 6th International Conference on Civil and Architecture Engineering, MTC, Cairo, Egypt

- Mahfouz, S.Y. (2011)" Parameter Identification of Finite Element Model Using a Genetic Algorithm ", Proceedings of 14th International Conference on Aerospace sciences and Aviation Technology, MTC , Cairo, Egypt.

- Rashad, M., Elwahab, M., Mahfouz, S. Y. and Amin, M (2012) " Numerical Study of Lightweight Sandwich Panels under Explosion using Rigid Polyurethan Foam and Vulcanized Rubber" 9th International Conference on Civil and Architecture Engineering, MTC, Cairo, Egypt

- Selema, Z., Farag, H.M., Mahfouz, S. Y. and Mazek, S.A. (2012) " Using Different Mitigation to increase the Resistance of Underground Concrete Subjected to Blast Loads " 9th International Conference on Civil and Architecture Engineering, MTC, Cairo, Egypt

- Shaheen, A., Mahfouz, S. Y., Amin, M. S. and Abu Hamd, M. (2014) " Shape Optimization of Concrete Slab subjected to Blast Load " 10th International Conference on Civil and Architecture Engineering, MTC, Cairo, Egypt

- Shaheen, A., Mahfouz, S. Y., Amin, M. S. and Abu Hamd, M. (2014) " Design Optimization Problem for concrete " 10th International Conference on Civil and Architecture Engineering, MTC, Cairo, Egypt.

- El-Amiri, Y., Mahfouz, S. Y., Amer, N., and Emam, M., (2014) "The Best Criteria for the Selection of Consultant Offices in Libyan Construction Industry", 10th International Conference on Civil and Architecture Engineering, MTC, Cairo, Egypt.

- El-Amiri, Y., Mahfouz, S. Y., Amer, N., and Emam, M., (2014) "Consultant Offices Selection using the Analytic Hierarchy Process", 10th International Conference on Civil and Architecture Engineering, MTC, Cairo, Egypt.

- Mahmoud, M., Mahfouz, S. Y., and Farag, H., (2016) "Behavior of Reinforced Concrete Slab with Alumium Foam Panels Subjected to Blast Loadings", 16th International Conference on Aerospace sciences and Aviation Technology, MTC , Cairo, Egypt.

- Mahmoud, M., Mahfouz, S. Y., and Farag, H., (2018) "Air Gap on the Structural Response of Aluminum Foam Protected Reinforced Concrete Panels", 12th International Conference on Civil and Architecture Engineering, MTC, Cairo, Egypt.

- Ibrahim, I. Y., Mahfouz, S. Y., Taher, S.M., and Kassem, M.M. (2019) "Sustainable Approach of Improving Concrete Compressive Strength Using Steel Slag", 2nd International Conference of Chemical, Energy and Environmental Engineering" ICCEEE 2019, Cairo, Egypt.

- Hamed, M. M., Khadr, W.H. Mahfouz, S. Y., and Elsayad, M.A. (2019) "Different Methods of Water Distribution Network Analysis". 2nd International Conference of Chemical, Energy and Environmental Engineering" ICCEEE 2019, Cairo, Egypt.

- Eslam Ahmed Fathi , Salah El-Din Taher & Sameh Yousef Mahfouz (2020) "Value engineering analysis of RC roadway bridges assimilating environmental impact", HBRC Journal, 16:1, 207-226 , DOI: 10.1080/16874048.2020.1794348.

- Yasser Tosson Mohamed, Salah El-Din Taher, Ahmed Nagy & Sameh Youssef Mahfouz (2020) Shear behavior of shallow-wide beams strengthened by external SHCC jacket, HBRC Journal, 16:1, 351-363, DOI: 10.1080/16874048.2020.1796083.

- Haytham Amr El-Kafrawy, Salah El-Din Taher, Sameh Yousef Mahfouz (2020) " Innovative Production of Structural Light-weight Concrete by manufactured Porous Basalt Aggregates", HBRC Journal, 16:1, 381-396, https://doi.org/10.1080/16874048.2020.1853011

8. Industrial Activities:

- Designed and supervised more than 150 steel and reinforced concrete projects.
- Preparing more than 350 technical reports in the civil engineering field.

9. Personal Information

Nationality : Egyptian
Date of Birth : October 18th 1966
Mail Address : 55 El Ansar Street, Dokki, Giza, Egypt, Post code (12311)
E-mail: symahfouz@aast.edu; symahfouz@hotmail.com;
https://www.aast.edu/cv.php?disp_unit=434&ser=146975
https://www.facebook.com/groups/1390663681048913/
https://www.facebook.com/groups/1028638290568617/
https://www.facebook.com/groups/148022455982950/

Cell Phone : 002 0100 2596399
002 0111 7112453

Statement of Teaching Philosophy

As a student, I have observed that the best teachers were those who cared the most about teaching. This passion is one of the single most important components of effective teaching as it leads to thorough preparation, continuous evolution of teaching skills, and the happiness of watching students learn. The amount of time that I put into preparation directly translates to how the students learn. However, I recognize how students learn best at the group and individual level. The ultimate goal for me is to communicate new information to students, not just memorizing facts, but also to learn how to think. This process can be made more efficient when both the students and myself enjoy what they are covering. Combined, these aspects allow me to determine how a certain group of students will learn best. In my teaching experience, efficient learning by students consists of the combination of formal lecture periods, and smaller discussion sections.

During lecture periods, students are exposed to a stream of organized information that will teach them the basic blocks of the subject. The impact on the student is enhanced when the lecture is given as a narrative; where the information is clear and organized but presented in a softer story-like manner rather than dry lecturing. This also allows me not just to present coherent information, but also to keep a captive audience. I endeavor to convince students to understand concepts so that they may apply these concepts in a variety of situations, rather than memorize steps to solve a particular problem. If I am successful, I expect students will be able to retain concepts more easily. I also recognize that students learn in a variety of ways, and I attempt to accommodate these methods. I encourage students to find personalized methods to understand and retain concepts, and I assist them by providing my own customized examples for explanation of concepts that elude them. In addition to different learning processes, I often find that students must simply be given the confidence to experiment in the application of newly gained knowledge and to ask questions to promote individual thinking.

In discussion sections, students working in smaller groups explore subjects at a deeper level than presented during lectures. In this open atmosphere, the discussion can progress on tangents instead as a linear narrative, allowing students to work on a specific subtopic before moving on to the next concept of the general subject. Some of my favourite teaching experiences have been when I have been able to integrate both lecturing and discussion components into a single setting. This can frequently occur in the form of review sessions. During the review sessions, I have the students work together to answer the questions. When new questions arise, I instruct them to ask each other so that everyone is part of the learning process. When they reach a question they can’t answer, it is now my task to do some lecturing, and help them sift through the material. I can review tricky material, or present a clearer picture than what was presented during the initial lecture. It is also in this forum that students can clearly see how I have a passion to teach. When helping students through a tricky problem, I enjoy watching the light flash in their eyes when they work a problem through to completion. My enthusiasm to teach translates to their enthusiasm to learn. This enthusiasm coupled with proper instruction allows the students not only to meet their educational goals, but also enjoy their time during the process. In an

effort to encourage discussion, I am always available to students. Although I arrange formal office hours, students are welcome to make appointments or find me anytime.

Among other duties, a university professor is “rightfully” expected to conduct research and nurture the education of undergraduate and graduate students. I find it important to carry out both activities concurrently, and ensure that experiences from research are implemented in courses for which I am responsible. Thus, students will gain from being exposed to current technology and information.

Finally, students deserve respect just as any other person, and there must be mutual respect between the students and me. I strive to earn students' respect in a variety of ways, given that respect cannot simply be awarded. I take a sincere interest in the well-being of students and interact with them on professional and social levels. I am convinced that social interaction with students develops a rapport with them and they are more comfortable when asking for assistance while in the classroom. In everything that I do, I want to be considered a fair and reasonable person.