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Education

- **Doctor of Philosophy (PhD) student** **2024**
  - Civil Engineering Department, Faculty of Engineering, Kafrelsheikh University.
- **Master's Degree student** **2024**
  - Business Administration Department, Faculty of Commerce, Kafrelsheikh University.
- **Master's Degree** **2023**
  - Structural Engineering Department, Faculty of Engineering, Menoufia University.
    - Created a very modern technique to support important constructions.
    - Published 3 international papers in the highest ranked journals, extracted from the thesis.
    - Awarded for the best master's thesis, Kafrelsheikh University.
    - Award a prize for international publishing.
- **Bachelor's degree** in civil engineering **2018**
  - Faculty of Engineering, Kafrelsheikh University.
    - Ranked as the first in the class with an excellent grade with honors (91.96%).
    - Achieved the ideal student for the year 2017.

Experience

- **Career Development Specialist** **2023-present**.
  - **University Center for Career Development, Kafrelsheikh university.**
    - Provided +16 workshops for +8000 students.
    - Supervised +50 events (informational sessions - round table - job Fairs).
    - Organized +32 training programs provided by the American University in Cairo.
    - Organized +18 training programs provided by the American Chamber of Commerce.
    - Generated +1500 job opportunities.
    - Conducted +390 one on one interview sessions.
    - Signed 35 cooperation protocols with private sector companies.
- **Assistant lecturer** **2023-present.**
  - **Civil Engineering Department, Faculty of Engineering, Kafrelsheikh University.**
    - Teaching of study programs for students of the four academic years such as: (Design of reinforced concrete structures - structural analysis - mechanics of materials - construction project management - earthquake and wind engineering - dams and reservoirs).
    - Published 7 international papers in field of construction with sustainable materials.
    - Prepared +12 scientific papers and submitting them to international journals.
    - Participation in international research teams in America, Canada, China, Australia.
    - Attended +6 international conferences in Egypt, Canada and China.
    - Obtained international awards in international publishing.
- **Certified Professional Trainer** **2023 – present.**
  - **American Chamber of Commerce.**
    - Prepared +8 training programs to improve the level of Egyptian university students.
    - Organized +14 workshops on time and team management for graduates of various specializations.
    - Provided training content on sustainable development at Kafrelsheikh University for +6000 students.
- **Certified Professional Trainer** **2023 – present.**
  - **Aspire for Consulting and Training.**
    - Provided+12 training courses on linking university graduates to the labor market.
    - Provided +8 courses on developing employability skills for students and graduates.
    - Provided +16 workshops on the art of resume writing to +12,000 students and graduates.
    - critiqued and modifying +1,500 CVs and provide suggestions for the best.

- **Certified Professional Trainer** **2023 – present.**
  - **National Institute for Governance and Sustainable Development, Ministry of Planning and Economic Development.**
    - Obtained the title of the top achiever in the Be an ambassador initiative at the Ministry of Planning and Economic Development, 2023.
    - Preparing +3 training programs on the international goals for sustainable development.
    - Providing +11 workshops on Egypt's 2030 plan for university students and young engineers.

- **Coordinator** **2022 – present.**
  - **"Haya Karima initiative" at the Abbas facility, Sidi Salem, Kafrelsheikh.**
    - Contributing to improving +350 homes to live at a decent standard.
    - Providing +140 stable sources of income for unemployed youth.
    - Providing awareness programs to develop the Egyptian countryside for +9,500 citizens.
    - Distributed +650 food boxes to eligible people in the villages.

- **Head of a youth entity** **2022 – present.**
  - **Sustainable Development Committee, Sub-Union of Engineers in Kafrelsheikh.**
    - Preparing more than 16 training courses to raise awareness of the importance of sustainable development.
    - Providing awareness curricula for more than 2,500 engineers.
    - Organizing the first simulation of the climate conference at the Engineering Syndicate.
    - Designing a 5-year strategic plan for the governorate.

- **Structural consulting engineer** **2022 – present.**
  - **Engineering Research and Consultation Center, Kafrelsheikh University.**
    - Design +4 giant hospitals in Kafrelsheikh.
    - Design +12 service buildings for the Kafrelsheikh and Behera suburbs.
    - Supervising the establishment of +10 service projects for the Ministry of Housing.
    - Preparing +6 tenders to be presented to contractors for implementation.
    - Preparing timetables for +18 projects of the Presidential Initiative for a Haya Karima.
    - Supervising the implementation of the presidential project to reclaim one and a half million acres.

- **General Coordinator of Student Activities** **2022-present.**
  - **Faculty of Engineering, Kafrelsheikh University.**
    - Organizing +4 parties to welcome new students.
    - Preparing +25 educational seminars and lectures to educate students.
    - Organizing + 13 workshops for major leading companies for College of Engineering students.
    - Preparing +19 sports, cultural and scientific competitions for students.
    - Organizing +8 recreational trips to Luxor, Aswan, Cairo, Port Said and Fayoum.
    - Organizing +3 graduation parties for bachelor's students in coordination with the university administration.
    - Organizing + 3 sports days at the university to practice various activities and competitions.

- **Rapporteur of the Students for Egypt group** **2022 - present.**
  - **Faculty of Engineering, Kafrelsheikh University.**
    - Prepared + 8 national lectures on national awareness, the October War, and the achievements of the Egyptian state.
    - Prepared +3 student competitions in the ancient and modern history of Egypt.
    - Organizing +2 massive student marches in support of Egypt and Mr. President.

- **Teaching Assistant** **2020-2022.**
  - **Civil Engineering Department, Faculty of Engineering, Kafrelsheikh University.**
    - Teaching of study programs for students of the four academic years.
    - Preparing scientific exercises for students to improve their comprehension ability.
    - Published 2 scientific papers in international scientific journals.
    - Attending 2 international conferences inside Egypt.

- **Structural Designer** **2020-2022.**
  - **Al Sakka Group Company, Cairo.**
    - Design + 48 residential buildings in Egypt.
    - Design +3 commercial malls in Saudi Arabia.
    - Supervising the implementation of the fourth industrial zone project in Quesna, Menoufia Governorate.
    - Supervising the implementation of a commercial mall building in Shebin El-Koum.

- Supervising the implementation of a marble factory in Galala City, Ain Sokhna.
- Preparing + 14 timetables for engineering projects inside and outside Egypt.

❖ **Civil Engineer** **2018-2020.**

- **Air Force Command, Egyptian Armed Forces.**
  - Design of the command building and aircraft control tower at Almaza Airport.
  - Implementing construction works to raise the efficiency of Almaza Airport.
  - Designing 12 villas for air force commanders' rest houses at the coastal airport in Burj Al Arab.
  - Implementing the interior finishes for the Air Force Command in the military entity in the New Administrative Capital.
  - Design and implementation of the additional part of the Air Forces House in Cairo.

Achievements

❖ Presidential Initiative Coordinator, Hayat Karima, at the local unit of the Monshat Abbas, Sidi Salem, Kafrelsheikh Governorate, **2024.**

❖ Member of the electoral campaign for President Abdel Fattah El-Sisi on behalf of youth entities in the governorate, **2024.**

❖ Obtaining 4 international publishing awards from Kafrelsheikh University, **2024.**

❖ Obtaining 2 international awards for publishing from Canada and Australia, **2024.**

❖ Member of the Metal and Concrete Structures Organization at the University of Victoria, Australia, **2023.**

❖ Obtaining the award for the best master's thesis, Kafrelsheikh University **2023.**

❖ 8 scientific research papers were published in the highest ranked scientific journals (Q1) in the field of specialization, and there are 13 research papers currently under publication, **2023.**

❖ published 6 books in the field of structural engineering and sustainable development internationally, **2023.**

❖ Member of the research team in a number of countries such as Canada, America, China, North Korea, Australia, Sweden, Turkey, France, Saudi Arabia, Yemen and Jordan.

❖ Member of the Kafrelsheikh University team to organize the Higher Education Conference affiliated with Akhbar Al-Youm Academy in Cairo and Alexandria, **2023.**

❖ Member of the jury of environmentally friendly green colleges at Kafrelsheikh University, **2023.**

❖ Member of the Violence Against Women Committee at Kafrelsheikh University, **2023**

❖ Organizer of the IEEE Cairo 2022 conference, **2022.**

❖ Vice President of the Standard of Community Participation and Environmental Development at the Quality Unit at Kafrelsheikh University, **2022-present.**

❖ Member of the Technical Committee for Reconciliations on Buildings in Kafrelsheikh Governorate, **2022-present.**

❖ Member of the Crisis and Disaster Committee, Faculty of Engineering, Kafrelsheikh University, **2021-present.**

❖ Deputy Director of the Concrete Laboratory and Heavy Facilities, College of Engineering.

❖ Member of the Engineering Research and Consultation Center, Faculty of Engineering, Kafrelsheikh University, **2020-present.**

❖ President of the College Student Quality Team, **2017-2018.**

❖ Ideal Student at Kafrelsheikh University, **2015.**

❖ President of the Student Union of Faculty of Engineering, Kafrelsheikh University, **2014-2015.**

Courses

- Certified Professional Trainer (CPT), Ministry of Planning and Economic Development, **2024.**
- Certified Professional Trainer (CPT), American chamber of commerce (AmCham), **2023.**
- Career Development Specialist (CDF), (AUC), **2023.**
- Fundamentals of Labor Market and Quantitative Data Management Training, (AUC), **2023.**
- Egypt Award for Government Excellence Training, Ministry of Planning, **2023.**
- Exam systems and student assessment, Kafrelsheikh university, **2022.**
- Organizing scientific conferences, Kafrelsheikh university, **2022.**
- Local TOFEL, Kafrelsheikh university, **2022.**
- University administration, Kafrelsheikh university, **2022.**
- Credit hours, Kafrelsheikh university, **2022.**
- Strategic Planning, Kafrelsheikh university, **2022.**
- Strategies and National Security-National Defense College, **2022.**
- Crises and Negotiation - National Defense College, **2022.**
- Decision Makers- National Defense College, **2022.**
- Research team Management, Kafrelsheikh university, **2021.**
- International scientific publication, Kafrelsheikh university, **2021.**

Conferences

- International Conference on Advances in Structural and Geotechnical Engineering, Hurghada, Egypt, **2025.**
- The twelfth conference for sustainable development – Faculty of Engineering, Menoufia University, Hurghada, Egypt, **2024.**
- International Conference on Advances in Structural and Geotechnical Engineering, Hurghada, Egypt, **2023.**
- COP27 climate conference in Sharm El Sheikh, **2022.**
- COY27 Youth Climate Conference in Sharm El Sheikh, **2022.**
- International Conference on Higher Education, New Administrative Capital, Egypt, **2023.**
- Akhbar Al-Youm Academy Conference for Higher Education, Cairo, **2023.**
- Computing and Artificial Intelligence Forum, Faculty of Computers and Information - Kafrelsheikh university, **2023.**
- The twelfth conference for sustainable development – Faculty of Engineering, Menoufia University, Hurghada, Egypt, **2022.**
- 3rd International Conference of the Faculty of Specific Education Future Visions for Developing Specific Education in Accordance with the Requirements of the Digitization Era and Crisis of Covid, Hurghada, Egypt, **2021.**
- International Conference on Advances in Structural and Geotechnical Engineering, Hurghada, Egypt, **2021.**

Publications

- Ghalla, M., Shaaban, I. G., Elsamak, G., Badawi, M., Alshammari, E., & Yehia, S. A. (2025). Restoration of shear capacity in RC beams with cut circular web openings using stainless steel, aluminium sheets, and GFRP bars. *Engineering Structures*, *334*, 120215.

- Ghalla, M., El-Naqeeb, M. H., Li, W., Wang, P., Mansour, W., & Tawfik, T. A. (2025). Shear behavior of environmentally friendly rubberized RC beams externally strengthened with side-bonded prefabricated SHCC plates. *Case Studies in Construction Materials*, e04936.

- Ghalla, M., Badawi, M., Hu, J. W., Elsamak, G., Mlybari, E. A., & Emara, M. (2025). Ultimate performance of two-way reinforced concrete flat slabs enhanced by SHCC drop panels mitigating punching failure. *Journal of Building Engineering*, *99*, 111574.

- Ghalla, M., Bahrami, A., Badawi, M., Elsamak, G., Emara, M., & Abdallah, A. M. (2025). Sustainable shear strengthening of defected RC beams using aluminum boxes and high-performance concretes. *Ain Shams Engineering Journal*, *16*(5), 103354.

- Mansour, W., Ghalla, M., El-Demerdash, W. E., & Elwakkad, N. Y. (2025). Experimental and numerical insights into the ultimate capacity, stiffness, and absorbed energy of RC masonry columns strengthened using various arrangements of SHCC reinforced with continuous glass fiber textile mesh layers. *Construction and Building Materials*, *475*, 141188.

- Elsamak, G., Alkhawaldeh, A. A., Badawi, M., Alshammari, E., Tawfik, T. A., & Ghalla, M. (2025). Externally bonded and anchored engineered cementitious composite and glass fiber mesh strips for enhancing defected RC beams in shear. *Case Studies in Construction Materials*, *22*, e04385.

- Emara, M., Tawfik, T. A., Ghalla, M., Elsamak, G., Basha, A., & Badr el-din, A. (2025). ECC-enhanced aluminum dowels: A solution for better load transfer in rigid concrete pavements. *Case Studies in Construction Materials*, *22*, e04529.

- Alkhawaldeh, A. A., Ghalla, M., Elsamak, G., Badawi, M., Mlybari, E. A., & Shaaban, I. G. (2025). Shear performance of RC beams strengthened via sustainable NSM-SHCC strips reinforced by high strength steel wires. *Engineering Structures*, *334*, 120120.

- Fayed, S., Badawi, M., Ghalla, M., Mlybari, E. A., Iskander, Y., & Yehia, S. A. (2025). Effect of reinforcement configurations on behavior of non-straight RC beams under torsion: Optimization for construction safety. *Engineering Structures*, *340*, 120725.

- Ghalla, M. S., ElSammak, G., Israel, M., & Abdelazeem, F. (2025). Comparative Analysis of Novel Sustainable Strengthening Techniques for Reinforced Concrete Slabs: A Review of Novel Technologies. *Journal of Contemporary Technology and Applied Engineering*, *4*(1), 80-96.

- Hamoda, A., Ahmed, M., Fayed, S., Ghalla, M., Baktheer, A., & Abadel, A. A. (2025). Compressive behaviour of RC walls strengthened horizontally with near-surface-mounted closed stirrups and externally bonded stainless steel strips. *Magazine of Concrete Research*, 1-21.

- Albogami, A., Fayed, S., Ghalla, M., E Nawar, M., & Badr el-din, A. (2025). Effects of type and gradation of coarse aggregates on tensile strength of concrete with different grades: an experimental investigation. *Innovative Infrastructure Solutions*, *10*(6), 1-16.

- Nawar, M., Alkharisi, M. K., Bayoumi, E. S. A., Ghalla, M., Fayed, S., Sobuz, M. H. R., & Aliyu, S. (2025). Shear Behavior of Reinforced Concrete Beams with Vertical Holes externally Strengthened with near Surface Mounted Bars.

- Fayed, S., Badawi, M., Ghalla, M., Mlybari, E. A., Iskander, Y., & Yehia, S. A. (2025). Experimental and numerical study of tubular steel columns with/without demountable bolted shear connectors embedded in the concrete. *Scientific Reports*, *15*(1), 14632.

- Fayed, S., El-Zohairy, A., Salim, H., Mlybari, E. A., Bazuhair, R. W., & Ghalla, M. (2025). Shear Strength of Concrete Incorporating Recycled Optimized Concrete and Glass Waste Aggregates as Sustainable Construction Materials. *Buildings*, *15*(9), 1420.

- Fayed, S., El-Zohairy, A., Salim, H., Mlybari, E. A., Bazuhair, R. W., & Ghalla, M. (2025). Bearing Strength of Concrete Pedestals Partially Loaded at Early Ages: An Experimental Work Mitigating Failure Risk. *Buildings*, *15*(7), 1107.

- Fayed, S., Ghalla, M., Mlybari, E. A., Bazuhair, R. W., Madenci, E., & Özkılıç, Y. O. (2025). Using Near-Surface-Mounted Small-Diameter Steel Wires to Improve Construction Efficiency in Strengthening Substandard Lapped Spliced Reinforced Concrete Beams. Buildings 2025; 15: 957. *doi. org/10.3390/buildings15060957*.

- Fayed, S., Ghalla, M., El-Zohairy, A., Mlybari, E. A., Bazuhair, R. W., & Emara, M. (2025). Construction Efficiency in Shear Strengthening of Pre-Cracked Reinforced Concrete Beams Using Steel Mesh Reinforced Strain Hardening Cementitious Composites. Buildings 2025; 15: 945. *doi. org/10.3390/buildings15060945*.

- Hamoda, A., Bahrami, A., Abadel, A. A., Ahmed, M., & Ghalla, M. (2025). Strengthening Reinforced Concrete Walls with Externally Bonded Galvanized Steel Sheets and Near-Surface Mounted Steel Bars. *Buildings*, *15*(4), 636.

- Elsamak, G., Ghalla, M., Badawi, M., Albogami, A., Tawfik, T. A., & Shahin, R. I. (2025). Anchored and Epoxied Ferrocement Strips for Improving Flexural Performance of Two-Way Reinforced Concrete Slabs. *Case Studies in Construction Materials*, e04314.

- Heneash, U., Ghalla, M., Tawfik, T. A., Elsamak, G., Emara, M., & Basha, A. (2024). Impact of Various Dowel Bars Techniques in Joints of Plain Concrete Connected Rigid Pavements: Experimental and Numerical Investigations. *Results in Engineering*, 103858.

- Elsamak, G., Ghalla, M., Hu, J. W., Albogami, A., Emara, M., & Ahmed, S. O. (2024). Embedded Aluminum Sections and Prestressed High-Performance Concretes for Improving Shear Performance of RC Beams. *Case Studies in Construction Materials*, e04168.

- Badawi, M., Bahrami, A., Ghalla, M., Emara, M., Mlybari, E. A., & Elsamak, G. (2024). Flexural strengthening of reinforced concrete cantilever beams having insufficient splice length. *Results in Engineering*, *24*, 102869.

- Fayed, S., Ghalla, M., Hu, J. W., Mlybari, E. A., Albogami, A., & Yehia, S. A. (2024). Shear Strengthening of RC Beams Using Prestressed Near-Surface Mounted Bars Reducing the Probability of Construction Failure Risk. *Materials*, *17*(23), 5701.

- El Zareef, M. A., Ghalla, M., Hu, J. W., & Elbisy, A. M. (2024). Machine learning approaches for estimating concrete shear strength in FRP reinforced members without shear reinforcement. *Steel and Composite Structures*, *53*(3), 327.

- Abadel, A. A., Baktheer, A., Emara, M., Ghallah, M., & Hamoda, A. (2024). Flexural behavior of precast concrete-filled steel tubes connected with high-performance concrete joints. *Materials Science Poland*, *42*(3), 72-85.

- Ghalla, M., Badawi, M., Elsamak, G., Ahmed, M., Liang, Q. Q., & El Zareef, M. A. (2024). Strengthening of reinforced concrete beams with insufficient lapped splice length of reinforcing bars. *Engineering Structures*, *321*, 118922.

- Emara, M., Elsamak, G., Ghalla, M., Hu, J. W., Badawi, M., & Salama, M. I. (2024). Shear improvement of defected RC beams with sustainable aluminum boxes incorporating high performance concretes. *Case Studies in Construction Materials*, *21*, e03500.

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- Ghalla, M., Mansour, W., Li, W., Wang, P., Badawi, M., & El Zareef, M. A. (2024). Enhancing the punching performance of two-way RC flat slabs using different configurations of embedded aluminum sections: Experimental program and numerical analysis. *Construction and Building Materials*, *434*, 136737.

- Hamoda, A., Ghalla, M., Yehia, S. A., Ahmed, M., Abadel, A. A., Baktheer, A., & Shahin, R. I. (2024). Experimental and numerical investigations of the shear performance of reinforced concrete deep beams strengthened with hybrid SHCC-mesh. *Case Studies in Construction Materials*, e03495.

- El Zareef, M. A., Ghalla, M., Hu, J. W., & El-Demerdash, W. E. (2024). Damage detection of lightweight concrete dual systems reinforced with GFRP bars considering various building heights and earthquake intensities. *Case Studies in Construction Materials*, *20*, e03191.

- El Zareef, M. A., Ghalla, M., Hu, J. W., & El-Demerdash, W. E. (2024). Damage detection of lightweight concrete dual systems reinforced with GFRP bars considering various building heights and earthquake intensities. *Case Studies in Construction Materials*, *20*, e03191.

- Ghalla, M., Badawi, M., Mlybari, E. A., & Hu, J. W. (2024). Enhancing shear strength of RC beams through externally bonded reinforcement with stainless-steel strips and FRCM jacket to mitigate the failure risk. *Results in Engineering*, *22*, 102246.

- Alharthai, M., Bahrami, A., Badawi, M., Ghalla, M., Elsamak, G., & Abdelmgeed, F. A. (2024). Numerical study on enhancing shear performance of RC beams with external aluminum alloy plates bonded using steel anchors. *Results in Engineering*, *22*, 102143.

- Emara, M., Ghalla, M., Hu, J. W., Badawi, M., Mlybari, E. A., & Ahmed, S. O. (2024). Enhancement of cantilevered RC beams exhibiting inadequate lap spliced reinforcement using sustainable reinforced ECC layers. *Construction and Building Materials*, *428*, 136272.

- Mansour, W., Li, W., Ghalla, M., Badawi, M., & El Zareef, M. A. (2024). Improving the punching capacity of two-way RC flat slabs via external strengthening using various configurations of aluminum sheets. *Construction and Building Materials*, *420*, 135611.

- Hamoda, A., Ahmed, M., Ghalla, M., Liang, Q. Q., & Abadel, A. A. (2023). Flexural performance of precast circular reinforced concrete members with intermediate connection filled with ultra-high-performance-concrete. *Case Studies in Construction Materials*, *19*, e02386.

- Hamoda, A. A., Ahmed, M., Abadel, A. A., Ghalla, M., Patel, V. I., & Liang, Q. Q. (2023, November). Experimental and numerical studies of circular precast concrete slender columns with intermediate connection filled with high-performance concrete. In *Structures* (Vol. 57, p. 105204). Elsevier.

- Hamoda, A. A., Eltaly, B. A., Ghalla, M., & Liang, Q. Q. (2023). Behavior of reinforced concrete ring beams strengthened with sustainable materials. *Engineering Structures*, *290*, 116374.

- Hamoda, A. A., Eltaly, B., & Ghalla, M. S. (2023). Numerical investigation on reinforced concrete closed curved beams subjected to internal pressure strengthened with sustainable material. *ERJ. Engineering Research Journal*, *46*(2), 233-247.

- Abdelmgeed, F. A., Ghallah, G., & Hamoda, A. (2022). Optimum cost design of reinforced concrete beams using artificial bee colony algorithm. *Int J Adv Struct Geotech Eng*, *6*, 110-129.

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📌 Web of Science: https://www.webofscience.com/wos/author/record/MGU-6711-2025

📌 Scopus: https://www.scopus.com/authid/detail.uri?authorId=58294626700

📌 Research Gate: https://www.researchgate.net/profile/Mohamed-Ghalla?ev=hdr_xprf

📌 Google Scholar: https://scholar.google.com/citations?user=J_gcWD0AAAAJ&hl=ar