

C.V

Mahmoud Soliman Abd Elfattah

Contact Information

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Objective

Dedicated and highly motivated engineering professional with a strong academic background and a passion for education and research. Seeking to leverage extensive experience in engineering mathematics, teaching, and academic advising to contribute to a dynamic academic environment. Committed to fostering student success, advancing scientific knowledge through rigorous research, and supporting institutional goals.

Education

- Ph.D. in Engineering Mathematics (Expected 7/2025)
 - Faculty of Engineering, Ain Shams University, Egypt.
 - Thesis Title: “Exact Solitary Wave Solutions of Some Nonlinear Evolution Equations with Distinct Physical Structures”
- Master of Science (M.Sc.) in Engineering Mathematics (1/9/2021)
 - Faculty of Engineering, Ain Shams University, Egypt.
 - Thesis Title: “Optimal Reconfiguration of Radial Distribution Power Systems Using a Heuristic Optimization Approach”
- Diploma Degree in Engineering Mathematics (2017)
 - CGPA: 3.98
- Bachelor of Science (B.Sc.) in Electrical Power and Machines Engineering (7/2014)
 - Faculty of Engineering, Ain Shams University, Egypt.
 - Total Grade: Excellent (88%)
 - Rank: 9th of 2014 Power Class
 - Graduation Project: Power Distribution for an Industrial Plant
 - Project Grade: Excellent

Academic Experience

- Assistant Lecturer in Engineering Mathematics Department
Ain Shams University, Faculty of Engineering (1/2017 – Present)
Work responsibilities :
 - Teach comprehensive instruction for various mathematics courses, including Calculus (I, II, & III), Math (1 & 2), Differential Equations (PHM 113s & 112s), Probability and Statistics (PHM111 & 111s), and Discrete Mathematics, for both mainstream and credit hours programs.
 - Developed and updated course materials, assignments, and examinations to ensure alignment with curriculum objectives and enhance student learning outcomes.
 - Provided academic support and mentorship to students, contributing to improved understanding of complex mathematical concepts and fostering a positive learning environment.
- Adjunct Assistant Lecturer in Engineering Mathematics Department
Arab Academy for Science, Technology and Maritime Transport (1/2025 – Present)
Work responsibilities :
 - Teach comprehensive instruction for various mathematics courses, including Calculus (I, II, & III), Math (1 & 2), Probability and Statistics.
- Academic Advisor for Freshman Level
Ain Shams University, Faculty of Engineering (2022/2023 - Present)
Work responsibilities :
 - Guided and supported freshman students in understanding university regulations (Faculty Laws 2018, 2023) and navigating academic policies.
 - Provided personalized academic and social counseling to students, addressing concerns and facilitating their integration into the university community.
 - Advised students on departmental choices and suitable training opportunities to enhance their career prospects.
 - Assisted students with course registration, add/drop procedures, and informed them about faculty activities and resources.

Professional Experience

- Electro-mechanical Engineer
 - COFFOR Misr for Building Systems (8/2014 - 1/2017)
 - Managed progress bills and conducted estimation works for construction projects, including the Black Ball Academy – 5th Settlement.
 - Coordinated and followed up with sub-contractors to ensure project timelines and quality standards were met.
 - Implemented robust document control procedures to maintain organized project records.
 - Supervised on-site technicians, provided technical guidance, and ensured adherence to safety protocols.
 - Performed quantity surveying and contributed to design modifications and drawing preparations.

Publications

- Soliman, M., Ahmed, H. M., Badra, N., Ramadan, M. E., Samir, I., & Alkhatib, S. (2025). Influence of the β -fractional derivative on optical soliton solutions of the pure-quartic nonlinear Schrödinger equation with weak nonlocality. *AIMS Mathematics*, 10(3), 7489-7508. **(Q1 Journal)**
- Soliman, M., Ahmed, H., Badra, N., & Samir, I. (2024). Highly dispersive gap solitons for conformable fractional model in optical fibers with dispersive reflectivity solutions using modified extended direct algebraic method. *AIMS Mathematics*. **(Q1 Journal)**
- Soliman, M., Ahmed, H. M., Badra, N., Samir, I., & Eslami, M. (2025). Novel optical soliton solutions using improved modified extended tanh function method for fractional beta time derivative (2+1)-dimensional Schrödinger equation. *Modern Physics Letters B*, 39(24), 2550084. **(Q2 Journal)**
- Soliman, M., Ahmed, H., Badra, N., & Samir, I. (2024). Dispersive perturbations of solitons for conformable fractional complex Ginzburg–Landau equation with polynomial law of nonlinearity using improved modified extended tanh-function method. *Optical and Quantum Electronics*. **(Q2 Journal)**
- Soliman, M., Ahmed, H., Badra, N., & Samir, I. (2024). Effects of fractional derivative on fiber optical solitons of (2 + 1) perturbed nonlinear Schrödinger equation using improved modified extended tanh-function method. *Optical and Quantum Electronics*. **(Q2 Journal)**
- Soliman, M., Ahmed, H., Badra, N., & Samir, I. (2020). Distribution Power System Reconfiguration Using Whale Optimization Algorithm. *Int. J. Appl. Power Eng. IJAPE*, 9(1), 48–57. [1] **(Q3 Journal)**
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Training Courses

- **Upskill Campaign (TDC) (25/8/2024 - 5/9/2024)**
 - Self-exploration
 - Effective communication

- Public Speaking
- Building and managing a work team
- Emotional intelligence
- Leadership skills
- Active learning strategies
- **Scholarly Publishing in Indexed Journals for PhD and MD Students** (TDC, Ain Shams University, 25/8/2024 - 26/8/2024)
- **Student Engagement Techniques** (TDC, Ain Shams University, 18/9/2024 - 19/9/2024)
- **Effective Teamwork** (TDC, Ain Shams University, 28/9/2024 - 29/9/2024)
- **Creative Thinking Skills** (TDC, Ain Shams University, 2/10/2024 - 3/10/2024)
- **Sustainable Energy Systems and Their Impact on the Carbon Footprint** (TDC, Ain Shams University, 14/10/2024 - 15/10/2024)
- **Credit Hours and Academic Advising** (TDC, Ain Shams University, 2/4/2021 - 2/5/2021)
- **E-learning by Moodle** (TDC, 2/4/2021 - 2/5/2021)
- **Advanced Skills of PowerPoint Presentation** (TDC, 20/4/2020 - 21/4/2020)
- **Scientific Writing** (TDC, 29/8/2022 - 30/8/2022)
- **Legal Aspects of the University Work for Teaching Staff** (TDC, 12/8/2024 - 13/8/2024)
- Distribution Course (3 Brothers Company)
- Schneider Electric Sessions (Circuit Breaker – PLC)
- Introduction to MATLAB (2011)
- ICDL Certificate (Dec 2010)
- Basic Electronics (2010) (Participated in student activity (connected family))

Internship Experience

- **Elsewedy Electric Group** (14/7/2013 - 25/7/2013)
 - Elsewedy Cables (Egytech)
 - Elsewedy Transformers
 - United Industrial Company (UIC)
 - ISKRA EMECO
 - Elsewedy Engineering Co.
 - Elsewedy Isolator
- **Arab Organization for Industries (Motors Unit)** (11/8/2013 - 29/8/2013)

Languages

- Arabic: Native language
- English: Very good written and spoken

Computer Skills

- Matlab
- Mathematica

- AutoCAD
- Microsoft Windows
- MS Office (All versions)
- Internet Applications
- Visual Basic

References

Furnished upon Request.