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8/2022 - ...	Assistant Lecturer	Department of Mathematics Engineering of Physics, Higher Institute of Engineering, Shorouk Academy, Egypt
9/2024 - ...	Assistant Lecturer	Department of Mathematics Engineering of Physics, Arab Academy for Science, Technology & Maritime Transport, Egypt

Membership of Scientific Associations:

- 1- Member of the Egyptian Mathematical Society (2025- ...)

Referee for the following Journals:

- 1- Optical and Quantum Electronics.
- 2- Physics Letters B.
- 3- International Journal of Applied and Computational Mathematics.
- 4- Zeitschrift für angewandte Mathematik und Physik from Dr Zuazua

List of Publications:

- 1- Adel Darwish, Hamdy M. Ahmed¹, Medhat Ammar, Mohammed H. Ali, and Ahmed H. Arnous, " SOLITONS AND OTHER SOLUTIONS FOR THE (2+1)-DIMENSIONAL HEISENBERG FERROMAGNETIC SPIN CHAIN EQUATION USING IMPROVED MODIFIED EXTENDED TANH-FUNCTION METHOD ", Advances in Mathematics: Scientific Journal 10 (2021), no.11, 3491–3504.
- 2- Adel Darwish , Hamdy M. Ahmed , Medhat Ammar , Mohammed H. Ali , Ahmed H. Arnous, " General Solitons and other solutions for coupled system of nonlinear Schrödinger's equation in magneto-optic waveguides with anti-cubic law nonlinearity by using improved modified extended tanh-function method ", Optik, 35 (2021), Number 13, 2150168.
- 3- Mohammed H. Ali , Hassan M. El-Owaidy , Hamdy M. Ahmed , Ahmed A. El-Deeb , Islam Samir , " Solitons and other wave solutions for (2+1)-dimensional perturbed nonlinear Schrödinger equation by modified extended direct algebraic method", Journal of Optics, (2023) 1-9.
- 4- Mohammed H. Ali , Hassan M. El-Owaidy , Hamdy M. Ahmed , Ahmed A. El-Deeb , Islam Samir , " Analytic Wave Solutions

of Nonlinear Maccari System Using Modified Extended Mapping Method", International Journal of Theoretical Physics (2023) 62:203.

- 5- Mohammed H. Ali , Hassan M. El-Owaidy , Hamdy M. Ahmed , Ahmed A. El-Deeb , Islam Samir , Construction of solitons in nano optical fibers with dual-power law nonlinearity using MEDAM", Optical and Quantum Electronics (2023) 55:1220.
- 6- Mohammed H. Ali , Hassan M. El-Owaidy , Hamdy M. Ahmed , Ahmed A. El-Deeb , Islam Samir , " Optical solitons and complexitons for generalized Schrödinger–Hirota model by the modified extended direct algebraic method", Optical and Quantum Electronics (2023) 55:675.
- 7- Mohammed H. Ali , Hassan M. El-Owaidy , Hamdy M. Ahmed , Ahmed A. El-Deeb , Islam Samir , " Optical solitons for fourth order nonlinear Schrödinger’s equation with cubic–quintic–septic–nonic nonlinearity using improved modified extended tanh-function scheme ", Ain Shams Engineering Journal, 15 (2024) 102413.
- 8- Mohammed H. Ali , Hassan M. El-Owaidy , Hamdy M. Ahmed , Ahmed A. El-Deeb , Islam Samir , " New analytic wave solutions to $(2 + 1)$ -dimensional Kadomtsev–Petviashvili–Benjamin–Bona–Mahony equation using the modified extended mapping method", Optical and Quantum Electronics (2024) 56:320.
- 9- Mohammed H. Ali , Hassan M. El-Owaidy , Hamdy M. Ahmed , Ahmed A. El-Deeb , Islam Samir , " Exploration new solitons to generalized nonlinear Schrödinger equation with Kudryashov’s dual form of generalized non-local nonlinearity using improved modified extended tanh-function method", Journal of Optics, (2024) 1-12.
- 10- Mohammed H. Ali , Hamdy M. Ahmed , Assmaa Abd-Elmonem , Nagat A.A. Suoliman , Karim K. Ahmed , Islam Samir , Optical solitons for generalised perturbed nonlinear Schrödinger model in the presence of dual-power law nonlinear medium ", Optik - International Journal for Light and Electron Optics 319 (2024) 172112.
- 11- Wafaa B. Rabie, Eman S. Almotairi, Hamdy M. Ahmed, Mohammed H. Ali, " Exact wave structures with stochastic effects in birefringent optical fibers modeled by cubic-quintic-septic nonlinear Schrödinger equation " , **Scientific Reports** (2025) 15:30165.
- 12- Mohammed H. Ali , Hamdy M. Ahmed , Wafaa B. Rabie, "Solitons and Other Wave Solutions for $(3+1)$ -Dimensional Boussinesq KP-Type Equation in Fluid Mediums Using Improved Modified Extended Tanh Function Method", Journal of Applied Nonlinear Dynamics (2025).
- 13- Karim K. Ahmed, Hamdy M. Ahmed, Taha Radwan, M. Elsaid Ramadan, Soliman Alkhatib, Mohammed H. Ali " Optical solitons for generalized perturbed nonlinear Schrödinger model in the presence of dual-power law nonlinear medium " , Fractional Optical Solitons in Metamaterial-Based Couplers with Strong Dispersion and Parabolic Nonlinearity 9, 720 (2025)
- 14- Mohamed F. Ismail, Hamdy M. Ahmed, Asmaa Abd-Elmonem, Mawadda E. E. Abul Hassan, Mohammed F. Shehab, Mohammed H. Ali, "Investigation of internal heat source effects on wave behavior in temperature-dependent thermoelastic media using modified extended direct algebra technique under Green–Lindsay theory ", Acta Mech (2025).

15-M. Elsaid Ramadan, Mohamed F. Ismail, Hamdy M. Ahmed, Ahmed Abouelregal, Mohammed Fouad Abdo Shehab, Mohammed H. Ali, "Study of the physical behavior of nonlinear thermoelastic waves in the Green-Lindsay model using advanced analytical technique ", Multidiscipline Modeling in Materials and Structures (2026).