

## Curriculum Vitae (CV)

**Hanaa Ali Eldidamony**



### Personal Information:

**Academic Rank:** Lecturer

**Department:** Basic Science

**Specialization:** Mathematical Engineering (Pure Mathematics: Differential Equations).

**Position:** Lecturer

**Google Scholar:** [Hanaa A. Eldidamony - Google Scholar](#)

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## Education:

| Degree | Discipline | Institution                      | Year                              |
|--------|------------|----------------------------------|-----------------------------------|
| Ph.D.  | Ph.D.      | Pure Mathematics                 | AL-AZHAR UNIVERSITY(GIRLS BRANCH) |
| M.Sc.  | M.Sc.      | <b>Pure Mathematics</b>          | ZAGAZIG UNIVERSITY                |
| B.Sc.  | B.Sc.      | Mathematics and Computer Science | ZAGAZIG UNIVERSITY                |

## Academic Experience:

**Institution:** Higher Technological Institute: 10th of Ramadan branch (HTI)

**Rank:** Lecturer

**Dates:** from 9/2022 till Now

**Institution:** Higher Technological Institute: 10th of Ramadan branch (HTI)

**Rank:** Assistant Lecturer

**Dates:** from 9/2017 to 8/2022

**Institution:** Higher Technological Institute: 10th of Ramadan branch (HTI)

**Rank:** Teaching Assistant

**Dates:** 9/2009 to 8/2017

## Research interests:

- optical fiber
- optics
- solitons

## Publications:

- E. A. Youness, M. A. Maaty, H.A. Eldidamony, A Two-dimensional approach for finding approximated solutions of optimization problems, International Journal of Advanced Research 4(2): 1083-1090, (2016).
- E. A. Youness, M. A. Maaty, H.A. Eldidamony, A Two-dimensional approach for finding solutions of nonlinear fractional programming problems, Journal of computer science approaches 2(1): 6-10, (2016).
- H.A. Eldidamony, Hamdy M. Ahmed, A.S. Zaghrou, Y.S. Ali, Ahmed H. Arnous, Mathematical methods for construction new soliton solutions of Radhakrishnan-Kundu Lakshmanan equation, Alexandria Engineering Journal, 61(9) (2022)7111-7120.
- Hanaa A. Eldidamony, Hamdy M. Ahmed, Afaf S. Zaghrou, Youssra S. Ali, Ahmed H. Arnous, Highly dispersive optical solitons and other solutions in birefringent fibers by using improved modified extended tanh-function method, Optik 256(2022)168722.
- Hanaa A. Eldidamony, Hamdy M. Ahmed, Afaf S. Zaghrou, Youssra S. Ali, Ahmed H. Arnous, Optical solitons with Kudryashov's quintuple power law nonlinearity having nonlinear chromatic dispersion using modified extended direct algebraic method, Optik 262(2022)169235.
- Hanaa A. Eldidamony, Hamdy M. Ahmed, Afaf S. Zaghrou, Youssra S. Ali, Ahmed H. Arnous, Structures solitons in birefringent fibers with Kerr and non-local laws of refractive index using improved modified extended tanh-function method, Results in Physics 38(2022)105641.
- Hanaa A. Eldidamony, Hamdy M. Ahmed, Afaf S. Zaghrou, Youssra S. Ali, Ahmed H. Arnous, Cubic-quartic solitons in twin-core couplers with optical metamaterials having Kudryashov's sextic power law of arbitrary refractive index by using improved modified extended tanh-function method, Optik 265(2022)169498.
- Hanaa A. Eldidamony, Hamdy M. Ahmed, Afaf S. Zaghrou, Youssra S. Ali, Ahmed H. Arnous, Exploring the solitons for multiple-core couplers having optical metamaterials using the modified extended direct algebraic method, Optik 267(2022)169646.
- El-didamony, H., Ahmed, H.M., Zaghrou, A. et al. Perturbations of solitons in highly dispersive for nonlinear Schrödinger's equation without self-phase modulation using modified extended direct algebraic technique. Opt Quant Electron 54, 788 (2022).
- Islam Samir, Taher A. Nofal, Ahmed H. Arnous, Hanaa A. Eldidamony. Traveling wave solutions for the Radhakrishnan–Kundu–Lakshmanan equation with a quadrupled nonlinearity law. Optik 276, 170683 (2023).
- Hanaa A. Eldidamony, Ahmed H. Arnous, Taher A. Nofal , Yakup Yildirim, Optical soliton solutions in birefringent fibers with multiplicative white noise: an analysis for the perturbed Chen–Lee–Liu model. Nonlinear Dyn 112, 22295–22322 (2024). <https://doi.org/10.1007/s11071-024-10218-5>.
- H. A. Eldidamony, A. H. Arnous, M. Mirzazadeh, M. S. Hashemi, and M. Bayram, “Comparative approaches to solving the  $(2 + 1)$ -dimensional generalized coupled nonlinear Schrödinger equations with four-wave mixing”, NAMC, vol. 30, no. 1, pp. 83–107, Jan. 2025, doi: 10.15388/namc.2025.30.38324.

- Eldidamony HA, Murad MAS, Arnous AH, Yildirim Y, Biswas A, Moraru L. Optical Solitons with the Concatenation Model Having Fractional Temporal Evolution with Depleted Self-Phase Modulation. Contemp. Math. [Internet]. 2025 Mar. 19 [cited 2025 Aug. 1];6(2):1926-54. Available from: <https://ojs.wiserpub.com/index.php/CM/article/view/6345>.
- Eldidamony HA, Nofal TA, Yildirim Y, Arnous AH, Mahmood AS, Biswas A. Cubic-Quartic Solitons for Gerdjikov-Ivanov Equation with Differential Group Delay in Presence of Multiplicative White Noise. Contemp. Math. [Internet]. 2025 Jun. 4 [cited 2025 Aug. 1];6(3):3472-513. Available from: <https://ojs.wiserpub.com/index.php/CM/article/view/6937>.

### Conferences:

- Attending the 6th. Symposium of fractional calculus and applications group “one day conference in mathematics”, Faculty of Science, Alexandria University, August 4th 2014.
- Attending summer school of fractional-order differential equations. Faculty of Science, Alexandria University, August 5-7, 2014.
- Participating in the 5th International Conference on Mathematics & Information Science (ICMIS), Zewail City of Science and Technology, 11-13 Feb.2016, E. A. Youness, M. A. Maaty, H.A. Eldidamony, A Two-dimensional approach for finding solutions of nonlinear fractional programming problems.
- Participating in the Workshop on Computer Science and their Applications, Department of Math., Faculty of Science, Zagazig University, 16 July- 2016. (E. A. Youness, M. A. Maaty, H.A. Eldidamony, A Two-dimensional approach for finding solutions of nonlinear fractional programming problems).
- Participating in the international Conference on Mathematics, Trends and Development Science (ICMTD17), The Egyptian Mathematical Society, 28-30 Dec.2017. (E. A. Youness, N.A.El-Kholy, H.A. Eldidamony, Advanced Approach for Multi-Objective Fractional Programming Problems) .

### Workshops:

- Attending workshop (Computer Science and their Applications), Department of Math., Faculty of Science, Zagazig University, 16 July- 2016.
- Attending workshop (International Publication Course for Scientific Research), Higher Technological Institute, 10th of Ramadan City, 17-18 Nov 2018.
- Attending promoting your research capabilities-the modern knowledge cycle, Higher Technological Institute, 10th of Ramadan City, 06 Aug 2019.
- Attending Effective teaching and learning strategies for higher education colleges and institutes, 10th of Ramadan City, 4-5 Dec 2021.

- Attending Exam systems and student assessment for higher education colleges and institutes, Higher Technological Institute, 10th of Ramadan City, 13-14 Dec 2021.
- Attending Training Program (Digital Education Technology), Girls Azhar Computer Center, Al-Azhar University, 31 June to 2 August.

### Training Courses:

- C#.net [C# (Consol-Window Application) & ASP.net & ADO.net & MS SQL Server 2005], ICT center, Zagazig, Egypt, 2008.
- Soft skills [Presentation Skills & Time Management & Project Management & Communication Skills & C.V and Interview Skills], ICT center, Zagazig, Egypt, 2008.
- Computer and its applications in different sciences [windows, Microsoft Office, Internet, Latex, Spsswin]. General Administration for Graduate Studies and Research, Management training teaching assistants Center, Zagazig University, 3 August- 2015.

### Teaching Experience:

#### Courses taught

- Differential Equations
- Numerical Methods
- Complex Analysis
- Calculus
- Advanced Calculus
- Linear Algebra
- Operations Research
- Statistics