Curriculum Vita

Dr. Reda Abd Elkader Mohamed Ibrahim

- **Lecturer, Basic Sciences Department, Faculty of Engineering - Shubra - Benha University, Egypt.**

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- **Tel.: 0228885137-01060854479-01146458461**

Personal information

- **Name:** Reda Abdelkader Mohamed Ibrahim

- **Date of birth:**   14 / 1 / 1985

- **Nationality:**   Egyptian

- **Marital status: Married**

- **Military service: Completed**

- **Google citations:** R.A.Ibrahim - Google الباحث العلمي من

- **Address:**   8 Jadallah Lane - Safa & Marwa St. - Happiness Basin - Khosous - Qalyubia.

Scientific Information's

- Bachelor of Pure Mathematics -Faculty of Science –Banha University - May 2006 -very good

- Master of Science in Pure Mathematics from the department of Mathematics - Faculty of Science – Ain Shams University (A Comparative Analysis of Some Numerical Methods for Integral Equations) (2014).

- Doctor of Philosophy (P.h.D) in Pure mathematics from   the department of Mathematics - Faculty of Science – Ain Shams University (A Numerical Treatment of Fractional Integro-Differential Equations) (2018).

Experiences

1. (December 2007 - may 2014) Demonstrator in Basic Sciences Department, Faculty of Engineering - Shubra - Benha University, Egypt.

2. (May 2014 - November 2018) assistant lecturer in Basic Sciences Department, Faculty of Engineering - Shubra - Benha University, Egypt.

3. (November 2018 - Now) lecturer in Basic Sciences Department, Faculty of Engineering - Shubra - Benha University, Egypt.

4. Teaching all the following courses at faculty of engineering Shubra Benha University since December 2007.

Courses :

- Differentiation and its applications & Integration and its applications

- Analytical and solid Geometry & Linear algebra.

- Partial differentiation and its applications.

- Differential equations.

- Vector analysis and its applications.

- Series solution & Special functions.

- Laplace transforms & Multiple integrals.

- Taylor and McLaurin expansion.

- Infinite series.

- Fourier series & Fourier integral.

- Complex functions & Complex integrations.

- Numerical analysis with programming.

- Linear programing and operation research.

- Engineering Statics.

- Integral equations And Transformation (Postgraduates).

- Advanced topics in Numerical Analysis (Postgraduates).

Languages

Arabic and English: good writing, reading & speaking

Computer Skills:

- Some experiences with different, Work systems Office (Word, Excel, Power point), some internet abilities.

- Computer programs: Mathematica and Latex.

Research Interests

1. Numerical analysis.
2. Integral equations and its applications.
3. Partial differential equation and its applications.
4. Semi-analytical and Numerical methods.
5. Heat and mass transfer.
6. Mathematical Programming.

Personal skills

- Deputy Coordinator of Student Activities at the college
- Member of the Strategic Planning Unit at the College.
- Working with team effectively.
- Able to work well under pressure.
- Able to learn new tasks quickly.

List of publications

(1) Zahran E. H. M., Bekir A., **Ibrahim R.A**., Myrzakulov R.; **(2024)** "The new soliton solution types to the Myrzakulov-Lakshmanan-XXXII-equation" AIMS Mathematics, 9(3): 6145–6160, DOI: 10.3934/math.2024300 (**Q1: IF 2.2).**

(2) **Ibrahim R.A**., Zahran E. H. M., Bekir A., **(2024**); "Unique soliton solutions to the nonlinear Schrödinger equation with weak non-locality and cubic–quintic–septic nonlinearity in nonlinear optical fibers" Applied Physics B (2024) 130:34, doi.org/10.1007/s00340-023-08171-z, **(Q2: IF 2.25).**

(3) **Ibrahim R.A**., Zahran E. H. M., Bekir A., **(2024)** "Effective analytical solutions versus numerical treatments of Chavy-Waddy-Kolokolnikov bacterial aggregates model in phototaxic" Eur. Phys. J. Plus (2024) 139:135, doi.org/10.1140/epjp/s13360-024-04934-5,**(Q1: IF 3.51)** .

(4) Zahran, E. H. M., Bekir,A., **Ibrahim, R.A**.: **(2023);** "New optical soliton solutions of the popularized anti-cubic nonlinear Schrödinger equation versus its numerical Treatment"; Optical and Quantum Electronics 55:377, **(Q2: IF 3)**.

(5) Zahran E. H. M**., Ibrahim R.A.**, Ozsahin D.U., Ahmad H., Shehata M. S. M; **(2023);** New diverse exact optical solutions of the three-dimensional Zakharov–Kuznetsov equation"; Optical and Quantum Electronics 55:817, **(Q2: IF 3)**.

(6) Zahran E. H. M., Bekir A., **Ibrahim R.A**.; **(2023)** "New impressive analytical optical soliton solutions to the Schrödinger–Poisson dynamical system against its numerical solutions"; Optical and Quantum Electronics 55:377, **(Q2: IF 3)**.

(7) **Ibrahim, R.A**. , Mohamed S. A., **(2022):** "Application of Differential Transform Method with Adomian Polynomial for solving RLC Circuits Problems and Higher Order differential equations", Engineering Research Journal, 5, 4 doi 10.21608/ERJSH.2022.146768.1052.

(8) Youssef, I.K., **Ibrahim, R.A**., On the performance of Haar wavelet approach for boundary value problems and systems of Fredholm integral equations, Mathematics and Computer Science, science publishing group, Vol.2, No.4, 39-46, **2017.**

(9) Youssef, I.K., **Ibrahim, R.A**., Second order iterative techniques for boundary value problems and Fredholm integral equations, Computational and Applied Mathematics Journal, Vol.3, No.3, 13-21, **2017**.

(10) Youssef, I.K., **Ibrahim, R.A**. **(2013)**;" Boundary Value Problems, Fredholm Integral Equations, SOR and KSOR Methods" Life Science Journal. 10(2), 304 – 312. https://www.researchgate.net/publication/303053543_Boundary_Value_SOR_Methods

(11) Emad H. M. Zahran, Ahmet Bekir, Reda A. Ibrahim; The Double-Hump Soliton Solutions of the Coupled Manakov Equations in Fiber Lasers; Brazilian Journal of Physics (2024) 54:171, https://doi.org/10.1007/s13538-024-01549-0.

(12) Emad H. M. Zahran, Ahmet Bekir, Reda A. Ibrahim, New dynamics performance for established dark solitons in polariton condensate, Commun. Theor. Phys. 77 (2025) 035004, https://doi.org/10.1088/1572-9494/ad88f7.

(13) [**Emad H. M. Zahran**](), [**Hijaz Ahmad**](), [**Mostafizur Rahaman**]() & [**Reda A. Ibrahim,**]() Soliton solutions in (2+1)-dimensional integrable spin systems; An investigation of the Myrzakulov-Lakshmanan equation-II, [Optical and Quantum Electronics 2024,](), https://link.springer.com/article/10.1007/s11082-024-06602-5 (**Q2: IF 3**)**.**

(14) [Emad H. M. Zahran](), [Zhanar Umurzakhova](), [Ahmet Bekir](), [Ratbay Myrzakulov]() & [**Reda A. Ibrahim**]() **,** New diverse types of the soliton arising from the integrable Kuralay equations against its numerical solutions, [European Physical Journal Plus 2024,]() https://link.springer.com/article/10.1140/epjp/s13360-024-05765-0 (**Q1: IF 3.51**)

Awards and prizes.

Was honored by receiving a Certificate of Excellence from Benha University in scientific research in 2023-2024.

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