



Sayed A. Dahy

Curriculum Vitae

The relentless pursuit of ascension remains the essence of human philosophy.

Education

2002–2004 **General Secondary Education**, *Mankabad Secondary School, Assiut, Egypt, .*

2005–2009 **B.Sc. in Mathematics (First Class Honours)**, *Faculty of Education (Mathematics Department), Assiut University, Assiut, Egypt, .*

2009–2012 **B.Sc. in Mathematics (First Class Honours)**, *Faculty of Science (Mathematics Department), Assiut University, Assiut, Egypt, .*

2014–2019 **M.Sc. in Numerical Analysis**, *Faculty of Science (Mathematics Department), Assiut University, Assiut, Egypt, .*

Dissertation *Advances in the Numerical Solution of One-Dimensional Viscous Burgers' Equation Via Cole-Hopf Barycentric Gegenbauer Integral Pseudospectral Methods.*

Supervisors *Salah E. El-Gendi, Hassan M. El-Hawary, Abdallah-Elsafti, and Kareem T. Elgindy.*

2019–2024 **Ph.D. in Scientific Computations**, *Faculty of Science (Mathematics Department), Assiut University, Assiut, Egypt, .*

Dissertation *Advanced Numerical Solutions For Different-Dimensional Fractional Differential Equations.*

Supervisors *Hassan M. El-Hawary, Alaa Fahim*

Specialization

Scientific Computations (Numerical Analysis).

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🌐 <https://www.aun.edu.eg/science/ar/sayed-abd-el-mohsen-dahy-gaad>

Academic Employment

- 2012–2019 **Academic Demonstrator: tenure-track**, *Faculty of Science (Mathematics Department), Assiut University, Assiut, Egypt*.
- 2019–Present **Assistant Lecturer: tenure-track**, *Faculty of Science (Mathematics Department), Assiut University, Assiut, Egypt*.

Language Skills

Fluent in Arabic Language (mother tongue).

Fluent in English Language.

2021 Passed the ELPT test with a total score of 92.

I passed the English Language test in partial fulfillment of my M.Sc. and Ph.D. degrees held in the Faculty of Science at Assiut University with a general grade of "Excellent."

I have written many research papers and projects for the English Language published in international journals classified as **Q1**.

Computer Skills

Programming Languages FORTRAN, MATHEMATICA, MATLAB, and L^AT_EX.

Applications MathType, MS Office, Adobe Photoshop, Skype, MS Teams, and Zoom.

Operating Systems MS Windows

Teaching Experience

The following graduate and undergraduate level courses are/were taught with full responsibility including determining and grading assignments, quizzes, and exams, holding office hours, and assigning course grades.

Undergraduate Courses

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- 2012-2024
- Taught at Assiut University:
 - Mathematics (0).
 - Mathematics (I).
 - Mathematics (II).
 - Mathematics (III).
 - Calculus.
 - Mechanics.
 - Linear Algebra.
 - Advanced Calculus.
 - Numerical Analysis(I).
 - Numerical Analysis(II).
 - MATLAB Software.
 - Statistics (single variable).
 - Statistics (multivariant).
 - Introduction to Scientific Computing.
 - Real Analysis.
 - Mathematical Modeling.
 - Operations Research: Modeling, Linear Programming, and Nonlinear Programming.
 - Special Functions (Jacobi-Chebyshev-Legendre-Hermite-Bessel-Laguerre-Orthogonal Functions).

Research Interests

- Numerical Analysis.
- Fractional Differential Equations.
- Tempered Fractional Differential Equations.
- Tempered Fractional Burgers' Equations.
- Numerical solution of TFPDEs in half domain.
- Spectral and Pseudospectral Methods.
- Tempered Fractional ADI Heat Equation in three dimensions.

Current Job Duties

I conducted research and prepared articles and a thesis for publication. I also prepared academic presentations to be orally presented in domestic and international conferences and proceedings. Besides my regular responsibilities in academic research as a Ph.D. student, I also engaged in the following:

- Advising students on academic and related matters.
- Conducting tutorials under the direction of other academic staff in one or more subjects within a prescribed course of study in the university.
- Marking and commenting on projects, assignments, quizzes, and exams.
- Stimulating and guiding class discussions.

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ISI Journal Publications

- High-order spectral collocation method using tempered fractional Sturm–Liouville eigenproblems **Sayed A. Dahy**, HM El-Hawary, A Fahim, T Aboelenen Computational and Applied Mathematics 42 (8), 338.
- High-Order Chebyshev Pseudospectral Tempered Fractional Operational Matrices and Tempered Fractional Differential Problems A El-Abed, **Sayed A. Dahy**, HM El-Hawary, T Aboelenen, A Fahim. Fractal and Fractional 7 (11), 777.
- High-order numerical solution of viscous Burgers' equation using an extended Cole-Hopf barycentric Gegenbauer integral pseudospectral method **Sayed A. Dahy**, K.T. Elgindy. International Journal of Computer Mathematics 99 (3), 446-464.
- High-order numerical solution of viscous Burgers' equation using a Cole-Hopf barycentric Gegenbauer integral pseudospectral method K.T. Elgindy, **Sayed A. Dahy** Mathematical Methods in the Applied Sciences 41 (16), 6226-6251.

Submitted for Publication

- High-order tempered Jacobi-Müntz fractional pseudospectral method and image reconstruction application

Citations

https://scholar.google.com.eg/citations?hl=ar&user=x26dAHsAAAAJ&view_op=list_works&authuser=1&sortby=pubdate

Professional Activities & Memberships

- Member of The Egyptian Mathematical Society.

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