



# Ahmed Mohamed Ahmed Hassan

## Ph.D. in Pure Mathematics

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## Objective Summary

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I have nearly +19 years of experience in teaching mathematics, I have developed a strong academic and instructional background in pure mathematics at both universities and international schools. My expertise includes delivering high-quality lectures, designing comprehensive course materials, assessing student performance, and simplifying complex mathematical concepts in an engaging and accessible manner. I have taught a wide range of courses such as Calculus (Math 1, Math 2, Math 3), Numerical Analysis, Statistics, Probability, and Differential Equations. In addition, I am interested in teaching mathematics curricula used in international schools. I also hold the International Computer Driving License (ICDL) and demonstrate excellent proficiency in email and internet applications.

## Education

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- Ph.D. in Mathematics [Pure Mathematics] From Department of Mathematics, Faculty of Science, Al-Azhar University, Cairo, Egypt, Dec 2025.
- MSc. in Mathematics [Pure Mathematics] From Department of Mathematics, Faculty of Science, El-Minya University, Minya, Egypt, Feb 2015.
- Preliminary of MSc. Pure Mathematics, Department of Mathematics, Faculty of Science, El-Minya University, Minya, Egypt, June 2010.
- Bachelor's degree in Science Department of Mathematics [Pure Mathematics] From Bani Swef Branch – Cairo University, September-2001 to June-2005.

## Work Experience

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From Dec 2025 Until Now	Lecturer at Department of Basic Science (Mathematics), Higher Institute of Engineering and Technology, New Minya, Minya, Egypt.
From Feb 2015 – Dec 2025	Assistant Lecturer at Department of Basic Science (Mathematics), Higher Institute of Engineering and Technology, New Minya, Minya, Egypt.
From Sep 2006 – Feb 2015	Demonstrator at Department of Basic Science (Mathematics), Higher Institute of Engineering and Technology, New Minya, Minya, Egypt.
From Sep 2005 – June 2006	Teacher of Mathematics at Nile Egyptian International Schools (NIES), Cairo, Egypt.
Reviewing	Reviewer at the following journals: <ul style="list-style-type: none"><li>✓ Journal of Mathematics and Computer Science (ISR).</li><li>✓ Mathematical Methods in Applied Sciences (WILY).</li><li>✓ Journal of Inequalities and Applications (Springer).</li><li>✓ Advances in Difference Equations (Springer).</li></ul>

## **Main Mathematical Interests**

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My research interest concentrates in particular (Dynamic Inequalities on time scales), time scales, Fractional calculus, Partial Differential Equations, Integral Inequalities, Gronwall Inequality, Hardy Inequality, Hilbert Inequality, Integro-Differential Inequalities and their Applications, Differential Equations, Delay Differential Equations and study the qualitative as well as quantitative properties of its solutions for instance, Stability, Boundedness and Convergence.

## **Technical Courses**

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- ✓ Calculus (math1, math2, math3).
- ✓ Ordinary Differential Equations.
- ✓ Partial Differential Equations.
- ✓ Numerical Analysis.
- ✓ Special Functions.
- ✓ Discrete Mathematics.
- ✓ Statistics.
- ✓ Probability.
- ✓ Analytic Geometry.
- ✓ Complex Variable Theory.
- ✓ Metric Spaces.
- ✓ Operation Research.
- ✓ Applied Mathematics.
- ✓ International Schools Courses.

## **Software**

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- ✓ Microsoft Office (Word – Excel – PowerPoint).
- ✓ Microsoft Teams.
- ✓ Latex Program.
- ✓ Mat lap Program.

## **Skills & Abilities**

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### **• Specialized Mathematics Instructor (University & International Schools)**

- ✓ Establish strong and effective communication with students, faculty members, and academic administrators at both technical and management levels.
- ✓ Prepare professional PowerPoint presentations and deliver them to academic committees, department heads, and management, covering course progress, assessment outcomes, and recommendations for improvement.
- ✓ Review course plans, academic requirements, and curriculum specifications to ensure alignment with institutional and international standards.
- ✓ Collaborate with academic departments to develop course outlines, learning outcomes, and structured lesson plans for various mathematics courses.
- ✓ Integrate teaching activities with resource planning by preparing academic schedules, assessment timelines, and instructional workload distribution.
- ✓ Conduct analytical evaluations to identify learning gaps, student performance trends, and potential challenges in course delivery.
- ✓ Update, maintain, and revise weekly and monthly academic reports, including student performance summaries and progress metrics.
- ✓ Coordinate and conduct reviews of assessments, assignments, and exam structures to ensure fairness, quality, and compliance with academic policies.
- ✓ Report on performance comparisons between class sections or semester updates, including improvements, weaknesses, or changes in learning pace.
- ✓ Develop and implement evaluation systems (similar to EVM) to accurately measure student progress and instructional effectiveness.
- ✓ Identify academic risks affecting student outcomes and propose corrective strategies to minimize their impact.

- ✓ Perform “what-if” analysis on teaching methods and syllabus pacing when delays or challenges arise.
- ✓ Monitor class progress against the established course timeline and ensure that learning objectives are met on schedule.
- ✓ Identify deviations in student performance and potential risks of academic delay or underachievement.
- ✓ Coordinate with academic teams to implement remedial actions or enrichment plans.
- ✓ Update and maintain academic timelines, exam schedules, and coursework delivery plans.
- ✓ Track actual student performance against intended learning outcomes and curriculum expectations.
- ✓ Monitor student engagement and class participation to ensure consistent learning progression.
- ✓ Identify areas of academic weakness and implement strategies to enhance understanding and performance.
- ✓ Prepare regular academic reports, student progress forecasts, and semester performance analyses.
- ✓ Identify potential student issues, academic challenges, and classroom obstacles.
- ✓ Develop and implement risk-mitigation strategies to improve course outcomes.
- ✓ Monitor academic indicators throughout the semester to ensure continuous improvement.
- ✓ Demonstrated ability to develop and implement instructional policies and procedures.
- ✓ Perform other teaching-related duties as required by the department.
- ✓ Experience in training, mentoring, and guiding students in advanced mathematical thinking and problem-solving.

• **Planning and Instructional Design:**

- ✓ Proficient in planning and scheduling mathematics courses to ensure efficient delivery and timely completion of curriculum objectives.
- ✓ Skilled in developing comprehensive lesson plans, structured course schedules, and tracking student progress.
- ✓ Strong foundation in designing exams, quizzes, assignments, and assessment tools.
- ✓ Familiarity with modern teaching approaches and international standards in mathematics education.

• **Execution of Academic Activities:**

- ✓ Experienced in conducting practical exercises, problem-solving sessions, tutorials, and workshops.
- ✓ Knowledgeable in applying best teaching practices to ensure quality understanding and adherence to academic specifications.
- ✓ Skilled in supervising student projects, research tasks, and mathematics-related activities to ensure compliance with learning objectives.
- ✓ Proficient in managing classroom activities, ensuring academic discipline, and maintaining high teaching standards.

• **Technology & Tools:**

- ✓ Computer-Aided Teaching Tools (GeoGebra, MATLAB, LMS platforms).
- ✓ Educational Technology Integration.
- ✓ Digital Content Creation.

• **Additional Skills:**

- ✓ Ability to learn quickly and innovate in teaching methods.
- ✓ Strong problem-solving and analytical capabilities.

## **Conferences and Summer Schools**

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2020	9th International Conference on Mathematics and Information Sciences 6-8 Feb, 2020 Aswan, Egypt.
2019	5 <sup>th</sup> Symposium on Mathematical Analysis and its Applications 23 Dec. 2019 Cairo University, Egypt.
2017	International Conference for Basic Sciences th (9) Energy, Environment and Sustainable Development 27-29 Mar. 2017 Faculty of Science, Al-Azhar University, Cairo, Egypt.
2016	5th International Conference on Mathematics and Information Science (ICMIS2016) 11-13 Feb. 2016 Zewail City of Science and Technology, Cairo, Egypt.
2014	National Conference on Mathematics (Academy Scientific Research and Technology), Ain Shams University, Cairo, Egypt, Dec. 14-16.

## **Publications**

1. A. M. A. Hassan, M. R. A. Mubarak, H. F. Ahmed. Solution of Fractional Linear Control Systems by Using Adomain Decomposition Method. Assiut. Univ. J. of Mathematics and Computer Science, 41(2), 17-30, 2012.
2. Ahmad M. Hassan, Hassan M. El-Owaidy, Ahmed A. El-Deeb. Generalized Hardy-type inequalities using delta conformable calculus on time scales. Journal of Mathematics and Computer Science, 40(2):156-181, 2025. DOI: 10.22436/jmcs.040.02.02
3. Ahmad M. Hassan, Hassan M. El-Owaidy, Ahmed A. El-Deeb. Novel Hardy-type Inequalities Involving Delta Conformable Calculus on Arbitrary Time Scales. Al-Azhar bulletin of science, 2025. DOI: 10.21608/2636-3305.1699.
4. Ahmed A. El-Deeb, Barakah Almarri, Hassan M. El-Owaidy, Ahmad M. Hassan. On Novel Inequalities of Hardy Type Via Delta-Conformable Calculus in the Time-Scale Setting. Mathematical Methods in the Applied Sciences, 1-15, 2025. DOI: 10.1002/mma.70146.
5. Ahmad M. Hassan, Hassan M. El-Owaidy, Ahmed A. El-Deeb. Dynamic Hardy-type inequalities utilizing the delta conformable calculus on time scales. Journal of Inequalities and Applications, 2025:127, 2025. DOI: 10.1186/s13660-025-03376-6.

## **Language**

- ✓ Arabic: Native.
- ✓ English: Very Good.

## **Personal Information**

**Date of Birth:** 09 Sep 1984.

**Address:** El Fashan, Beni Suef, Egypt.

**Last Update:** 05 Dec 2025.

**References Furnished upon request**