Zeinab Mansour

Curriculum Vitae

The secret of getting ahead is getting started

Name: Zeinab Sayed Ibrahim Mansour

Date/Place of birth: 01.28.1976/Cairo/Egypt

Position: Professor . Department of Mathematics, Faculty of Science, Cairo University, Giza, Egypt.

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Scoups ID: 8549454200 H Index:11 Scoups Total citation :530 by 368 documents

Google Scholar H index: 13 Total citation: 1202.

Scientific Degrees

- B. Sc. in Mathematics , 1998, Department of Mathematics, Faculty of Science, Cairo University, with grade distinction with honor.
- M. Sc., Mathematics, 2002, Department of Mathematics, Faculty of Science, Cairo University. The Master thesis is refereed by Professors Joaquin Bustoz, USA, Arizona state University, and professor Ali Azzam, Suez Canal University.
- Ph. D., Mathematics, 2006, Department of Mathematics, Faculty of Science, Cairo University. The dissertation is refereed by Professors W. Hayman, Imperial College London, and G.E. Andrews, The Pennsylvania State University.

Positions Held

1999–2001 **Demonstrator**, *Department of Mathematics*, Faculty of Science, Cairo University. Egypt

2001–2006 **Teaching Assistant**, *Department of Mathematics*, Faculty of Science, Cairo University. Egypt

2006-2012 **Assistant Professor**, *Department of Mathematics*, Faculty of Science, Cairo University. Egypt

2012–2019 **Associate Professor**, *Department of Mathematics*, Faculty of Science, Cairo university. Egypt

I have been on a secondment to King Saud University in Saudi Arabia since February 2010.

2010–2013 **Assistant Professor**, *Department of Mathematics*, Faculty of Science, King Saud University.
Riyadh, Kingdom of Saudi Arabia.

2013-2018 **Associate Professor**, *Department of Mathematics*, Faculty of Science, King Saud University.
Riyadh, Kingdom of Saudi Arabia.

2019- **Professor**, *Department of Mathematics*, Faculty of Science, Cairo university.
Egypt

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List of Publications

From M. Sc

1. M.H. Abu Risha, M. H. Annaby, M. E. H Ismail, and Z.S.I. Mansour. Linear q-difference equations. Z. Anal. Anwend. 26 (2007), no. 4, 481–494 link.

From Ph.D

2. M.H. Annaby and Z.S. Mansour. Basic Sturm-Liouville problems. J. Phys. A 38 (2005), no. 17, 3775–3797. link Corrigendum: J. Phys. A 39 (2006), no. 27, 8747 link.
3. M.H. Annaby and Z.S. Mansour. On the zeros of basic finite Hankel transforms. J. Math. Anal. Appl. 323 (2006), no. 2, 1091–1103.link
4. M.H. Annaby and Z.S. Mansour. A basic analog of a theorem of Pólya. Math. Z. 258 (2008), no. 2, 363 –379. link

After Ph. D

5. M.H. Annaby and Z.S.I. Mansour. q-Taylor and interpolation series for Jackson q-difference operators. J. Math. Anal. Appl. 344 (2008) 472–483.link
6. Z.S.I. Mansour. Linear sequential q-difference equations of fractional order. Fract. Calc. Appl. Anal. 12 (2009), no. 2, 159–178.link
7. M.H. Annaby and Z.S.I. Mansour . On the zeros of the second and third Jackson q -Bessel functions and their associated q -Hankel transforms. Math. Proc. Cambridge Philos. Soc. 147 (2009), no. 1, 47–67.link
8. M.H. Annaby, Z.S.I. Mansour and O. A. Ashour . On reality and asymptotics of zeros of q-Hankel transforms. J. Approx. Theory 160 (2009), no. 1-2, 223–242.link
9. M.E.H. Ismail and Z.S.I. Mansour. q-analogues of Freud weights and nonlinear difference equations. Adv. in Appl. Math. 45 (2010), no. 4, 518–547.link.
10. M.H. Annaby, Z.S. Mansour , and O.A. Ashour. Sampling theorems associated with biorthogonal q-Bessel functions. J. Phys. A 43 (2010), no. 29, 295204, 15 pp.link

11. H. A. Hassan, M. EL-Shahed, and Z. S.I. Mansour. On the existence of positive solutions of a nonlinear q-difference equation. publication in Fixed Point Theory 13(2012), no.2, 517–526 link
12. M.E.H. Ismail, S.J. Johnston, and Z.S.I. Mansour. Structure relations for q-polynomials and some applications. Applicable Analysis 90(2011), Issue 3-4, Special Issue: SI Pages: 747–767.link
13. M.H. Annaby and Z.S. Mansour. Asymptotic formulae for eigenvalues and eigenfunctions of q-Sturm-Liouville problems. Math. Nach., 284(2011), Issue 4, Pages: 443–470. link
14. M.H. Annaby, H.A. Hassan, and Z.S.I. Mansour. Sampling Theorems Associated with Singular q-Sturm Liouville Problems, Results in Mathematics, September (2012),Vol.62, Issue 1-2, pp. 121–136. link
15. M.H. Annaby, Z.S. Mansour. I.A. Soliman. q-Titchmarsh-Weyl theory: series expansion, Nagoya Math. J., 205 (2012), 67–118. link
16. A.El-Guindy and Z.S. Mansour. Functional definitions for q-analogues of Eulerian functions and applications, Aequat. Math.,85 (2013), no. 1-2, 69-110. link
17. Zeinab S.I. Mansour. Generalization of fractional Leibniz formulae and applications. Advances in Difference Equations 2013, **2013:29**, 16 pp. link
18. Zeinab S.I. Mansour. q-Fractional calculus for Rubin's q-difference operator. Advances in Difference Equations 2013, **2013:276** 16 pp. link
19. Zeinab S.I. Mansour. On a Class of Nonlinear Volterra–Fredholm q-integral Equations. Fract. Calc. Appl. Anal. 17(2014), Issue 1, pp. 61–78. link
20. Mourad E.H. Ismail, and Zeinab S. I. Mansour. Functions of the second kind for classical polynomials. Adv. in Appl. Math. 54 (2014), 66 – 104. link
21. Zeinab S. I. Mansour and Nuha A. Muataz. Asymptotics of solutions of nonlinear Abel-Volterra q-integral equations near zero. J. Fract. Calc. Appl. 6 (2015), no. 1, 31–50. link
22. Ola A. Ashour, Mourad E.H. Ismail, and Zeinab S.I. Mansour . On certain dual q-integral equations. Pacific J. Math. 275 (2015), no. 1, 63 – 102. link
23. Ola A. Ashour, Mourad E.H. Ismail, and Zeinab S. I. Mansour. Dual and triple equations and q-orthogonal polynomials. J. Difference Equ. Appl. 22 (2016), no. 7, 973 – 988. link
24. Zeinab S.I. Mansour. Variational methods for fractional q-Sturm-Liouville problems. Bound. Value Probl. 2016, 2016:150, 31 pp. link
25. Zeinab S. I. Mansour, Maryam A. Al-Towailb. A reduction formula for a q-beta integral. Adv. Difference Equ. 2016, 2016:82, 8 pp. link
26. Zeinab S.I. Mansour, Maryam Al-Towailb. On certain triple q-integral equations involving the third Jackson q-Bessel functions as kernel. Adv. Difference Equ. 2016, 2016:81, 18 pp. link
27. Zeinab S.I. Mansour. On fractional q-Sturm–Liouville problems. J. Fixed. Point Theory and Applications. 19(2017), Issue 2, pp 1591–1612. link
28. Zeinab S. I. Mansour, Maryam Al-Towailb. q-Lidstone polynomials and existence results for q-boundary value problems. Bound Value Probl (2017) 2017: 178, 18 pp. link.
29. Zeinab S.I. Mansour. Orthogonal polynomials and continued fractions arising from contiguous relations and generalizations of Kummer and q-Kummer identities. Ramanujan J (2019): 49(2),

pp 353-369. link.

30. Mourad E.H. Ismail and Zeinab S.I. Mansour. q-analogs of Lidstone expansion theorem, two point Taylor expansion theorem, and Bernoulli polynomials. Analysis and Applications (2019): 17(6), pp. 853-895 . link
31. Zeinab S.I. Mansour, Maryam Al-Towailb. The complementary q-Lidstone interpolating polynomials and applications. Math. Comput. Appl. 25 (2020), no. 2, 15-34. link
32. Ahmed El-Guindy and Zeinab S.I. Mansour. On q-analogs of zeta functions associated with a pair of q-analogs of Bernoulli numbers and polynomials. Quaestiones Mathematicae. (2021), 1–28.link
33. Karima M. Oraby and Zeinab S.I. Mansour. Starlike and convexity properties of q-Bessel-Struve functions. Demonstratio Mathematica, **5**5(2022), no. 1, 61-80. https://doi.org/10.1515/dema-2022-0004. link
34. Karima M. Oraby and Zeinab S.I. Mansour: On q-analogs of Struve Functions, Quaestiones Mathematicae, (2022). DOI: 10.2989/16073606.2021.2011798link
35. S.Z.H. Eweis and Zeinab S.I. Mansour. Generalized q-Bernoulli polynomials generated by Jackson q-Bessel functions, Results Math. (2022) 77:132/ https://doi.org/10.007/sooo25-022-01656-x link
36. Zeinab S. I. Mansour and Maryam Al-Towailb. A q-Type k-Lidstone series for entire functions. AIMS Mathematics, 8(6): 13525âĂŞ13542, 2023. link
37. Maryam Al-Towailb and Zeinab S.I. Mansour. Conditional Expanding of Functions by q-Lidstone Series. Axioms 2023, 12, 22. https://doi.org/ 10.3390/axioms12010022.link
38. Maryam Al-Towailb and Zeinab S.I. Mansour. A q-Analog of the Class of Completely Convex Functions and Lidstone Series. Axioms 2023, 12, 412. https://doi.org/10.3390/ axioms12050412. link
39. Mourad E.H. Ismail and Zeinab S.I. Mansour. q-type Lidstobe expansions and on interpolation problems for entire functions. **1**42, 30 pages, 2023. link
40. Gamela E. Heragy, Zeinab S.I. Mansour, and Karima M. Oraby. Indefinite q-integrals of quotients of q-hypergeometric functions. Frontiers in Scientific Research and Technology 6, 41 –53, 2023.link
41. Gamela E. Heragy, Zeinab S. I. Mansour, and Karima M. Oraby. An Efficient Method for indefinite q-Integrals. Progr. Fract. Differ. Appl. 9, No. 3, 1–29, 2023. link

Accepted papers for publications

42. Mourad E.H. Ismail and Zeinab S.I. Mansour. q-type Lidstobe expansions and on interpolation problems for entire functions. Accepted for publications in Advances in Applied Mathematics, 2022.

Books

M.H. Annaby and Z.S. Mansour, q-Fractional Calculus and Equations. Lecture notes in Mathematics, Vol. 2056, 2012, Springer.link

Research interests

The basic topics of the previous research papers and the book as well as the thesis mentioned below are in the following fields in Mathematics.

1. q-series, q-difference equations, and q-fractional difference equations.
2. Orthogonal polynomials and special functions.
3. Asymptotics.

Editorial Boards

- Journal of Fractional Calculus and Applications, 2011-present link
- Communication in Fractional Calculus Journal, 2012-present link

Fellowships and Visits

November 1, 2006-January 31, 2007	Research fellowship from Alexander von Humboldt foundation (The new European Islamic Program in Kiel, Germany). The host professor was Prof. Walter Bergweiler from Christian-Albrechts-University, Kiel-Germany
Academic year 2008-2009	Research fellowship from the Binational Fulbright Commission in Egypt to conduct research at the University of Central Florida. My affiliate professor is Prof. Mourad Ismail.
July 4-20, 2011	Scientific visit to Professor Mourad E.H. Ismail in City University of Hong Kong, Hong Kong
August 12-24, 2013	Scientific visit to Professor Mourad E.H. Ismail in City University of Hong Kong, Hong Kong
August 28–September 4, 2016	The Birs activity "Bivariate Orthogonal Polynomials and Eigenvalues of Hankel Matrices (16rit684)", Banff Center for Arts and Creativity, Canada
July 1-21, 2019	Visiting professor to Abdus Salam International Center for Theoretical Physics , Trieste, Italy.

Training workshops

- 21-23 August 2006: A training course in the new direction in teachings: Faculty and Leadership Development Project- Cairo University.
- 28-31 August 2006: A training course on Scientific teaching methods: Faculty and Leadership Development Project- Cairo University.
- 7-9 August 2006: A training course on morals and missions rules: Faculty and Leadership Development Project- Cairo University.
- 14-16 August 2006: A training course on effective communications skills: Faculty and Leadership Development Project- Cairo University.
- 4-6 January 2010: A training course on credit hours system: Faculty and Leadership Development Project- Cairo University.
- 19-21 September 2010: The preparatory week of University teaching in King Saud University, Riyadh, KSA : Speakers are Professor Elizabeth Hammer and Dr. Jessica Irons.
- 30-31 July 2011: A training course in Effective Presentation: Faculty and Leadership Development Project- Cairo University.
- 6-8 August 2011: A training course in Time& Conference Management: Faculty and Leadership

Development Project- Cairo University.

- 9-11 August 2011: A training course in How to Compete for a Research Fund: Faculty and Leadership Development Project- Cairo University.
- 13-15 August 2011: A training course in International Publishing of Research: Faculty and Leadership Development Project- Cairo University.
- 16-18 August 2011: A training course in Strategic Planning: Faculty and Leadership Development Project- Cairo University.
- 3-4 July 2017: A training course in Exam and Student Evaluation Systems: Faculty and Leadership Development Project- Cairo University.
- 10-11 July 2017: A training course in Quality Standards in Teaching: Faculty and Leadership Development Project- Cairo University.
- 12-13 July 2017: A training course in Change Management: Faculty and Leadership Development Project- Cairo University.
- 19-20 July 2017: A training course in Stress Management: Faculty and Leadership Development Project- Cairo University.
- 24-25 July 2017: A training course in Legal and Financial Aspects in University Environment: Faculty and Leadership Development Project- Cairo University.
- 31 July-1 August, 2017: A training course in University Management:Faculty and Leadership Development Project- Cairo University.

Conferences

January, 3-6, 2006	The International Conference on Mathematical Analysis and its Applications ICMAA06 *Assuit*
April 17, 2008	Workshop on Mathematical Analysis and Applications, Cairo University, Egypt
19–21 April, 2009	The international Fulbright conference on "Equity, Access, Diversity: the Future of Higher Education", Washington DC
20–25 July , 2009	The 10th International Symposium on Orthogonal Polynomials, Special Functions and Applications(OPSF10) Leuven, Belgium
19–27 August , 2010	The International Congress of Mathematicians 2010 (ICM2010), Hyderabad, India.
27th July, 2011	The third Symposium of Fractional Calculus and Applications, Alexandria University, Alexandrian Egypt.
14-15 March, 2012	The second Symposium on Mathematics, King Saud University, Riyadh, Saudi Arabia
20-21 February, 2013	The International workshop on Special Functions and Applications. Riyadh, Saudi Arabia.
25-29 March, 2013	The 12th International Symposium on Orthogonal Polynomial, Special Functions and Applications (OPSF12), Sousse, Tunis.
11-12 April, 2018	The 4th Conference on Mathematical Science and Applications, King Saud University, Riyadh, Saudi Arabia
22- 26 July, 2019	The 15th International Symposium on Orthogonal Polynomials, Special Functions and Applications (OPSF12), Hagenberg, Austria.

4-8 November, 2019 Global Approach to the Gender Gap in Mathematical computing and Natural Science. How to measure it, How to Reduce it! ICTP, Trieste, Italy.

Awards

June 6, 2013 The" Scientific Excellence Award of King Saud University. The best author book (Science and Engineering branch) on my book "On q-fractional calculus and equations", Springer, 2012

Academic Advising

Master thesis supervised

1. Ola Ashour, Mathematic Department,Faculty of Science-Cairo University, On q-Hankel transforms on complex domains, degree conferred in September 2009.
2. Nuha Al Mutaza, Mathematic Department. Faculty of Science,King Saud University , Saudi Arabia, On nonlinear Volterra q-integral equations and their asymptotic solutions degree conferred in June 2015.

Master thesis under supervision

1. Sahar Ewies, Mathematics and Computer Science Department, Faculty of Science, Beni-Suef University, registered date is Feburary 2020.
2. Gamela Heragy, Mathematics Department, Faculty of Science, Suez University,Suez, On q-integral equations, registered date is March 2020.

Scientific Activities

- A lecture for a course in the Summer School 2009, Mathematics Department, Cairo University, which were sponsored by *Egyptian Mathematical Society*.
- Participate in the selection process in the AY 2009-2010 Fulbright Program Selection Process. The Binational Fulbright program Commission in Egypt.
- The principal investigator on a research project #10-MAT1293-02 funded by the National Plan of Science & Technology, King Saud University, 2011-2014.
- Member of the organizing committee of the second conference on" Developing Math Courses on High Education", King Saud University, Saudi Arabia, 23-24 May 2012.
- Member of the organizing committee of the third conference on Developing Math courses on High Education, King Saud University, Saudi Arabia, 13-15 May 2013.
- Member of the organizing committee of the international workshop of Special Functions and Orthogonal Polynomials, Riyadh, Saudi Arabia, 20-21 February 2013.
- An ambassador for the International Congress of Mathematics (ICM 2014), August 13-21, 2014, Coex, Seoul, Korea. link.

- Member of the scientific committee of the 13th international Symposium on orthogonal polynomials, Special functions& applications, June 1-5, 2015. National Institute of Standards and Technology, Gaithersburg, Maryland, USA. link

- Member of the scientific committee of the 15th International Symposium on Orthogonal Polynomials, Special Functions and Applications (OPSFA). The conference was held at Johannes Kepler University and the Research Institute for Symbolic Computation (RISC) in Hagenberg, Linz, Austria. The dates are July 22-26, 2019. link

- Member of the scientific committee of the one-day symposium on mathematical analysis and its applications,Mathematics Department, Faculty of Science, Cairo University. December 23, 2019.

Egyptian Association of Egyptian Women in Mathematics (EWMA)

I am the founder of the Association of Women in Mathematics, a part of the Egyptian Mathematical Society. We organized virtual events on May 16, 2020, and on June 12, 2021, to celebrate the International Day of women in Mathematics. Facebook page.
Through out the two years May 2020- May 2022, we organized the following events

- A virtual meeting via zoom to celebrate the international day of Women in Mathematics, May 12 in 2020 and 2021. In this meeting, we invited the late Prof. Intisarat El Shobky, a distinguished female professor, she talked about her career and gave advice to early career female researcher.

- We organized with the Cairo Analysis seminar of Cairo University a weekly seminar in analysis held every Monday. 3. We also created a Facebook page for the Association EWMA Facebook page. We published on the page some articles based on meetings we did with distinguished Egyptian female mathematicians.

- We also organized a session in "The 12 the Symposium of the fractional Calculus and Applications, 16-18 February, 2021". We invited Prof. June Barrow-Green, Open University UK, to talk about the history of women in Mathematics.

- We organized with Suez University "Symposium on Analysis with a focus on Special Functions, Orthogonal polynomials, and their applications, June 12, 2021âĂİ as a celebration of the international day of women in mathematics (May 12). The meeting was online via zoom, and we invited
  1. Prof. Margit R´osler, Paderborn University, Germany, 2. Prof. Kerstin Jordaan, University of South Africa, South Africa, as plenary speakers.

- We organized the "International day of Women in Mathematics Workshop, May 12 2022" hosted virtually by Nile University. In this workshop, we awarded with the Egyptian Mathematical Society two female mathematicians for their fruitful careers: The professors are
  1. Prof. Laila Fahmy Abdelal, Professor of Mathematics, Faculty of Science, Cairo University.
  2. Prof. Prof. Afaf abu Elfotoh, Professor of Mathematics, Faculty of Science, El Azhar University.

  This event include a panel discussion for "Early Career Researchers: Challenges and advice", the panelist were
  1. Dr. Amal Amin (Egypt): Associate professor of the National Academy of Science and Founder,

Women in science without borders, initiative

2. Prof. Rana Dajani (Jordan): Professor at Hashemite University, Jordan, and the President of the Society for the Advancement of Science, Technology and Innovation in the Arab World.
3. Prof. Mervat Foda(Egypt): Professor of Dairy Science and Technology, National Research Centre, Cairo, Egypt, the president of the Society of Women in Science in Developing Countries in Egypt (OWSD - Egypt National Chapter)
4. Dr. Josephine Kagunda(Kenya):
   mathematical modeler and senior lecturer of applied mathematics at the School of Mathematics, University of Nairobi, Kenya and
   Founder / President of Kenya Women in Mathematical Sciences Association (KWIMSA)
5. Marie Francoise Ouedraogo (Burkina Faso)
   Professor of Mathematics Department of the University of Ouagadougou. The president of the African Mathematical Union Commission on Women in Mathematics in Africa. The Founder of African Women in Mathematics Association (AWMA). The first Burkinabe woman who defended a thesis in mathematics (2009).
6. Dr. Lobna Said (Egypt)
   Associate professor, Nano electronics Integrated Systems Center (NISC), Nile University Co-Chair of the Egyptian Young Academy of Science (EYAS), ASRT, Egypt.

- On May 10, 2023, we organized a celebration in the Faculty of Science, Cairo University, to celebrate the international day of Women in Mathematics on May 12.
- May 28. 2023, we organize the "MUST Integration Bee Competition" in the faculty of Engineering, Misr University of Science and Technology.

Scientific Organizations membership

- A member of Siam (Society of industrial and applied mathematics).
- A member of Siam activity group of orthogonal polynomials and special functions.
- A member of the American Mathematical Society.
- A member of OWSD (Organization for Women in Science for the Developing World)
- A member of AWM (Association of Women in Mathematics)

Teaching philosophy

I have been teaching mathematics for almost two decades since I was a demonstrator and enjoy this work. During this long period, I gradually developed my teaching goals, strategies, and methods that I will describe below. I also feel that the teaching of mathematics should be devoted to more than simply transferring mathematical facts from the teacher and a textbook to a student's mind. As a mathematics professor, my objectives are:

- To invoke critical thinking of mathematical concepts in students;
- To instill in students a deep understanding of mathematics;
- To illustrate how mathematics is used to solve real-life problems;
- To ignite in students an interest in mathematics where such an interest does not exist.

Doing this can be a difficult task, but it is a task I welcome and enjoy undertaking.