

Dr. Faqiha Sultan

Assistant Professor

Department of Mathematics

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Google Scholar: <https://scholar.google.com/citations?hl=en&authuser=1&user=kpNIm94AAAAJ>

ResearchGate: https://www.researchgate.net/profile/Faqiha_Sultan

Education

Ph.D.	Mathematics, April 2017 University of Karachi
M.Sc.	Applied Mathematics, 2012 University of Karachi
B.Sc. (Hons)	Mathematics, 2011 University of Karachi
HSC	Pre-Engineering, 2008 Federal Board of Higher Secondary Education Fazaia Inter College, Malir, Karachi
SSC	Science Group, 2006 Board of Secondary Education, Faisalabad

Work Experience (6 Years)

- Assistant Professor, NED-UET, Karachi, 30 March 2018 to date.
- Assistant Professor, Mohammad Ali Jinnah University, Karachi, 23 January 2018 to 29 March 2018 (**2 months**).
- Assistant Professor, FAST-NUCES, Karachi, 13 April 2017 to 22 January 2018 (**9 months**).
- Lecturer, FAST-NUCES, Karachi, 01 August 2013 to 12 April 2017 (**3 years 8 months**).
- Visiting Lecturer, FAST-NUCES, Karachi, January 2013 to June 2013 (**6 months**).

Impact Factor 14.571

Citations 142 (via Google Scholar)

Research Papers Total 17 = **17** (International) **9** (JCR)

Book Chapters 2 (International)

Conferences and Workshops Total **16** = 6 (speaker) + 8 (participant) + 2 (organizer)

Reviewer

1. Referee of an International Journal *IEEE Access*, Publisher: IEEE. 2019
2. Referee of an International Journal *Propulsion and Power Research*, Publisher: Elsevier. 2018
3. Referee of an International Journal *Energy Reports*, Publisher: Elsevier. 2018
4. Referee of *International Journal of Fluid Mechanics Research*, Publisher: Begell House. 2017
5. Referee of an International Journal *Results in Physics*, Publisher: Elsevier. 2017

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Distinctions

- The youngest Ph.D. of Mathematics. Completed in the age of 25 years 20 days.
- Third position in M.Sc. Applied Mathematics, 2012.

Conferences and Workshops

Presented

1. On the double diffusive convection flow of Eyring-Powell fluid due to cone through a porous medium with Soret and Dufour effects, International conference on Computing and Mathematical Sciences, IBA Sukkur, Pakistan, 25-26 February 2017.
2. Haar wavelet solution of the MHD Jeffery-Hamel flow and heat transfer in Eyring-Powell fluid, 2nd National Conference on Recent Advances in Pure & Applied Mathematics, QUEST, Nawabshah, Pakistan, 20-22 January 2016.
3. Workshop on Scientific Writing, Professional Development Center, PAF-KIET, Pakistan, 9th and 10th May 2018.
4. Workshop on LaTeX, Professional Development Center, PAF-KIET, Pakistan, 2nd and 3rd February 2018.
5. Workshop on Analyzing Data Through SPSS, Department of English, University of Karachi, Pakistan, 29th March 2016.
6. Workshop on Awareness in Scientific Writing, Department of Mathematics, University of Karachi, Pakistan, 24th February 2016.

Participated

1. 14th International Conference on Statistical Sciences, Jinnah Sindh Medical University, Karachi, Pakistan, 14-16 March 2016.
2. 12th International Conference on Statistical Sciences, Dow University of Health Sciences, Karachi, Pakistan, 24-26 March 2014.
3. 1st National Conference on Space Sciences, University of Karachi, Pakistan, 18-19 October 2012.
4. Workshop on Faculty Development, NED-UET, 27 November - 26 December 2018.
5. Workshop on Faculty Development, FAST-NUCES, 07 August 2015.
6. Workshop on LaTeX, FAST-NUCES, 10 April 2015.
7. Workshop on Leadership Mastery, University of Karachi, 13 September 2012.
8. Arfa Karim Memorial Workshop on MATLAB, University of Karachi, 19-22 March 2012.

Organized

1. Workshop on Mathematical Models of Fluids: Methods and Applications, Department of Mathematics, University of Karachi, Pakistan, 28-30 August 2017.
2. Workshop on Awareness in Scientific Writing, Department of Mathematics, University of Karachi, Pakistan, 24 February 2016.

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Advance Courses

1. Lecture Series-II on Algebraic Fundamentals of Error Correcting Codes and Cryptography, University of Karachi, Pakistan, 16-18 January 2018.
2. Lecture Series-I on Algebraic Fundamentals of Error Correcting Codes and Cryptography, University of Karachi, Pakistan, 4-7 July 2017.
3. One semester course “Advanced Numerical Analysis” at IBA, Karachi, Fall-Semester, 2015.

Research Papers

2019

1. N. A. Khan, **Faqiha Sultan**, MHD Flow of Williamson Fluid over an Infinite Rotating Disk with Anisotropic Slip, Journal of Engineering Physics and Thermophysics, (2019). **Accepted**
2. **Faqiha Sultan**, N. A. Khan, A. Ara, M. I. Afridi, Investigation of Biological Mechanism during Flow of Nano-Bingham-Papanastasiou Fluid through a Diseased Curved Artery, Journal of Nanomaterials, Nanoengineering and Nanosystems, (2019). **Accepted**
3. 16. A. Ara, N. A. Khan, **Faqiha Sultan**, S. Ullah, Numerical Simulation of Jeffery-Hamel flow of Bingham plastic fluid and heat transfer in the presence of magnetic field, Applied and Computational Mathematics, 18 (2019) 135-148. **Impact factor: 3.16 JCR**
4. **Faqiha Sultan**, N. A. Khan, M Qasim, M. I. Afridi, Flow of Nano-Eyring-Powell Fluid through a Curved Artery with Time-Variant Stenosis and Aneurysm, Nihon Reorogi Gakkaishi (Journal of the Society of Rheology, Japan), 47 (2019) 75-85. **Impact factor: 0.554 JCR**

2018

5. N. A. Khan, **Faqiha Sultan**, Numerical analysis for the Bingham–Papanastasiou fluid flow over a rotating disk, Journal of Applied Mechanics and Technical Physics, 59 (2018) 638-644. **Impact factor: 0.64 JCR**
6. N. A. Khan, U.B. Saeed, **Faqiha Sultan**, S. Ullah, A. Rehman, Temperature distributions in boundary layer flow of fourth grade fluid over an exponential stretching sheet, AIP Advances, 8 (2018) 025011. **Impact factor: 1.65 JCR**

2017

7. N. A. Khan, **Faqiha Sultan**, Farah Naz, Entropy generation analysis and effects of slip conditions on micropolar fluid flow due to a rotating disk, Open Engineering, 7 (2017) 185-198.
8. N. A. Khan, **Faqiha Sultan**, Effect of anisotropic slip and magnetic field on the flow and heat transfer of Eyring-Powell fluid over an infinite rotating disk, International Journal of Fluid Mechanics Research, 4 (2017) 15434.

2016

9. N. A. Khan, **Faqiha Sultan**, A. Shaikh, A, Haar wavelet solution of the MHD Jeffery-Hamel flow and heat transfer in Eyring-Powell fluid, AIP Advances, 6 (2016) 115102. **Impact factor: 1.65 JCR**

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10. N. A. Khan, **Faqiha Sultan**, Homogeneous-heterogeneous Reactions in an Eyring-Powell Fluid over a Stretching Sheet in a Porous Medium, *Special Topics & Reviews in Porous Media: An International Journal*, 7 (2016) 15-25.
11. N. A. Khan, **Faqiha Sultan**, F. Riaz, M. Jamil, Investigation of combined heat and mass transfer between vertical parallel plates in a two-layer flow of couple stress nanofluid, *Open Engineering*, 6 (2016) 35-43.

2015

12. N. A. Khan, **Faqiha Sultan**, Q. Rubbab, Optimal solution of nonlinear heat and mass transfer in a two-layer flow with nano-Eyring-Powell fluid, *Results in Physics* 5 (2015) 199-205. **Impact factor: 2.147 JCR**
13. N. A. Khan, **Faqiha Sultan**, A note on soliton solutions of fractional hybrid lattice equations, *Egyptian Journal of Basic and Applied Sciences*, 2 (2015) 243-246.
14. N. A. Khan, **Faqiha Sultan**, On the double diffusive convection flow of Eyring-Powell fluid due to cone through a porous medium with Soret and Dufour effects, *AIP Advances*, 5 (2015) 057140. **Impact factor: 1.65 JCR**
15. N. A. Khan, **Faqiha Sultan**, Nadeem A. Khan, Heat and mass transfer of thermophoretic MHD flow of Powell-Eyring fluid over a vertical stretching sheet in the presence of chemical reaction and Joule heating, *International Journal of Chemical Reactor Engineering*, 13 (2015) 37-49. **Impact factor: 0.88 JCR**

2014

16. A. Ara, N. A. Khan, H. Khan, **Faqiha Sultan**, Radiation effect on boundary layer flow of an Eyring-Powell fluid over an exponentially shrinking sheet, *Ain-Shams Engineering Journal*, 5 (2014) 1337-1342.
17. N. A. Khan, F. Riaz, **Faqiha Sultan**, Effects of chemical reaction and magnetic field on a couple stress fluid over a non-linearly stretching sheet, *European Physics Journal-Plus* 129 (2014) Art. ID 18, Publisher: Springer. **Impact factor: 2.24 JCR**

Book Chapters

1. N. A. Khan, **Faqiha Sultan**, Physiological Modeling and Simulation of Fluid Flows, *Computational Approaches in Biomedical Nano-Engineering*, John Wiley & Sons, **2018**, Chapter 10, 255-281 (ISBN: 978-3-527-34474-1).
2. N. A. Khan, A. Shaikh, **Faqiha Sultan**, A. Ara, Numerical simulation using artificial neural network on fractional differential equations, *Numerical Simulation - From Brain Imaging to Turbulent Flows*, Ed. Ricardo Lopez-Ruiz, Intech, **2016**, Chapter 5, 97-112 (ISBN 978-953-51-4720-6).

Teaching

Courses taught at NED

Course	Department(s)	Level of Students (BS)
Calculus	Textile Engineering Computational Finance	Freshmen
Multivariate Calculus	Computational Finance	Sophomores
Probability & Statistics	Computer Science Construction Engineering Urban & Infrastructure Engineering	Sophomores

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	Applied Physics Electrical Engineering	
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Courses taught at MAJU

Course	Department(s)	Level of Students (BS)
Calculus & Analytical Geometry	Computer Science Software Engineering	Freshmen

Courses taught at FAST-NUCES

Course	Department(s)	Level of Students (BS)
Calculus-I	Computer Science	Freshmen
Calculus-II	Computer Science	Freshmen
Linear Algebra	Electrical Engineering Computer Science	Sophomores
Multivariable Calculus	Electrical Engineering	Sophomores
Probability & Statistics	Computer Science	Sophomores
Numerical Methods	Electrical Engineering Computer Science	Sophomores Juniors

Projects Supervised

1. Need of Virtual Education and its Significance in Pakistan, Proceedings of Multi-Disciplinary Student Research Conference, University of Wah, Wah Cantt, Pakistan, 16-17 November 2016, pp. 190-199.
2. Rise of entrepreneurship trends among students in Pakistan. Need of virtual education and its significance in Pakistan Proceedings of Multi-Disciplinary Student Research Conference, University of Wah, Wah Cantt, Pakistan, 16-17 November 2016, pp. 214-223.
3. Effects of the frequent use of calculators on students' basic mathematics skills, Proceedings of Multi-Disciplinary Student Research Conference, University of Wah, Wah Cantt, Pakistan, 16-17 November 2016, pp. 168-175.
4. The impact of socioeconomic status on body mass index, 14th International Conference on Statistical Sciences, Jinnah Sindh Medical University, Karachi, Pakistan, March 14-16, 2016. (Presented)
5. Effects of course repetition on students' subsequent progress: Need for supplementary exam, 14th International Conference on Statistical Sciences, Jinnah Sindh Medical University, Karachi, Pakistan, March 14-16, 2016, Vol. 29, pp. 435-442.
6. Privatization of Pakistan International Airlines: Effects on General Public and Employees, 14th International Conference on Statistical Sciences, Jinnah Sindh Medical University, Karachi, Pakistan, March 14-16, 2016. Vol. 29, pp. 443-452.
7. Pakistan in IT after 10 years: A statistical analysis, Proc. 12th International Conference on Statistical Sciences, Dow University of Health Sciences, Karachi, Pakistan, March 24-26, 2014, Vol. 26, pp. 307-314.
8. Relationship between the student's preference and the demand of the subfield in market, Proc. 12th International Conference on Statistical Sciences, Dow University of Health Sciences, Karachi, Pakistan, March 24-26, 2014, Vol. 26, pp. 265-272.
9. A statistical analysis of need and possibility of administration of bacteriophage therapy, Proc. 12th International Conference on Statistical Sciences, Dow University of Health Sciences, Karachi, Pakistan, March 24-26, 2014, Vol. 26, pp. 209-218.

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Certificates

1. Certificate of Publication from Elsevier, 2014
2. Certificate of 3rd Position in Masters, Department of Mathematics, University of Karachi, 2014
3. Certificate of Appreciation for Conducting Statistics Day at FAST-NUCES, 2014

Institutional Contribution at NED

- Advisor for first year students of Computational Finance, 2018-2019

Institutional Contribution at MAJU

- Designed course outline of all mathematics courses, 2018

Institutional Contribution at FAST-NUCES

- Member of Journal Committee of FAST Mathematics Journal, 2017
- Member of Vigilance and Final Examination Committee, 2016-2017
- Member of Job Interview Panel, 2016-2017
- Faculty head of Sportics Society, 2015-2017
- Member of Protection of Women against Harassment Committee, 2017
- Member of QEC Committee, 2015
- Member of Convocation Committee, 2015
- Member of Course Outline Modification Committee, 2014