

Prof. Dr. Farooq Ahmad Gujar (Postdoc/Ph.D.)

Professor of Mathematics/ Dean Faculty of Sciences/ Head of Institution/ Govt. Graduate College Township (affi. Uni. of The Punjab) Lahore, Pakistan

Visiting Professor of Mathematics/Postdoc/Researcher/School of Mechanical and Aerospace Engineering, NANYANG Technology University, Singapore

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• ID Card: 38101-0631340-1 • Date Of Birth: 20-05-1967

• Passport No. FH*****3

• Father's Name: Muhammad Ishaq

• Domicile: Bhakkar, Punjab, Pakistan

• Residence: Hose No. 701-E, Canal View Housing Society, Near Thoukar Niaz Baig, Lahore

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📄 <https://www.scholar.google.com/citations?hl=en&authuser=1&user=y6rWWvYAAAAJ>



Research Fields

- 📌 Phase Change Materials with Nanoparticles
- 📌 Heat and Mass Transfer / Fluid Dynamics
- 📌 Topology / Structure Optimization
- 📌 Inequalities and its Applications

Research Projects

- 2019-21 📌 1- Dynamical Behavior of Nanofluids in Various Geometries, Mathematics Department, College of Sciences, University of Ha'il, Ha'il, Saudi Arabia.
- 📌 2- Stabilization and Synchronization of Fractional integer-order Chaotic Systems, Mathematics Department, College of Sciences, University of Ha'il, Ha'il, Saudi Arabia.
- 2018-19 📌 3- Thermal Energy Storage and Two-Phase Flow Heat Transfer with Enhanced Structures Fabricated by Advanced Manufacturing Techniques, School of Mechanical and Aerospace Engineering, Nanyang Technological University, Singapore.
- 📌 4- On Stability of Nanoparticles to Enhance Thermal Performance of MHD Nanofluid flow Over a Stretchable Rotating Disk with Bioconvection Effects, School of Mechanical and Aerospace Engineering, Nanyang Technological University, Singapore.
- 📌 5- Successive Melting of A Phase Change Material Mixed With Nano Inclusions When Bounded In A Finned Rectangular Domain, School of Mechanical and Aerospace Engineering, Nanyang Technological University, Singapore.
- 2016-17 📌 6- The dynamics and heat transfer of sessile ferrofluid droplets in a magnetic field, A Joint Research Project between The Pakistan Science Foundation (PSF) Islamabad, Pakistan and National Natural Science Foundation of China (NSFC).
- 2015-16 📌 7- Shape Optimization in porous Medium, Majmaah University, Saudi Arabia.

Employment History

- 1993-to-Date **Government, Semi Government and Abroad Service Record:**
- 2023-to-date **Professor/Dean Faculty of Sciences, Head of Institution** Govt. Graduate College, Affi. University of the Punjab, Lahore[GGCT], **Pakistan**, Mathematics Department, GICCL, Lahore [PU].
- 2020-to-2023 **Professor/Dean Faculty of Sciences**, Govt. Islamia College Civil Lines, Affi. University of the Punjab, [GICCL], **Pakistan**, Mathematics Department, GICCL, Lahore [PU].
- 2019–2021 **Professor of Mathematics/Researcher/Online too** University of Hail, **Saudi Arabia**, , College of Science, Maths Dept. **Hail** [CSA].
- 2018–2019 **Visiting Professor/Postdoc Researcher, Nanyang Technological University** [NTU], **Singapore**, School of Mechanical and Aerospace Engineering [MAE].
- 2016-2018 **Professor/Dean Faculty of Sciences**, Punjab Higher Education Dept. (Affl. PU, Lahore, Govt. Islamia College Civil Lines, Lahore [GICCL], **Pakistan**.
- 2007–2007 **Visiting Researcher/Research Internship, Victoria University, Melbourne**, Victoria, **Australia**, , School of Computer Science and Mathematics [SCSM].
- 2014–2016 **Assoc. Prof. / Researcher** Majmaah University, Majmaah, **Saudi Arabia**, , College of Science, Maths Dept. **Alzulfi** [CSA].
- 2011–2014 **Principal/ Head of Institution / Assoc. Professor**, Punjab Higher Education Dept. (Affl. UOS) , Govt. College Darya Khan, Bhakkar, Punjab, **Pakistan**.
- 2011–2011 **Assistant Professor**, Punjab Higher Education Dept. (Affl. UOS) , Govt. Post Graduate College, Bhakkar, Pakistan.
- 1996–2011 **Lecturer**, Punjab Higher Education Dept. (Affl. UOS), , Govt. Post Graduate College, Bhakkar, Pakistan.
- 1993–1996 **Lecturer**, Punjab Higher Education Dept. (Affl. PU LHR) , Govt. Degree College, Isa Khel Mianwali and GCD Mankera, Bhakkar, Pakistan.

Administrative Experience

- 2023-to-date **Principal/ Head of Institution**, Punjab Higher Education Dept. , Govt. Graduate College Township, Lahore (Affl. University of Punjab (PU)) Pakistan.
- 2016–To-date **Principal / Dean Faculty of Sciences / Vice Principal**, Punjab Higher Education Dept. Government Colleges of Punjab [GGCT], (Affl. University of the Punjab, Lahore,), Pakistan.
- 2014–2016 **Student Research In-charge**, Majmaah University, Majmaah, Saudi Arabia, , Mathematics Department, College of Science, Alzulfi [CSA].
- 2011–2014 **Principal/ Head of Institution**, Punjab Higher Education Dept. , Govt. College Darya Khan, Bhakkar, (Affl. University of Sargodha (UOS)) Pakistan.
- 2012–2014 **Project Director**, Punjab Higher Education Dept., Govt. College, Darya Khan (Male and Female) Bhakkar, Punjab, Pakistan.
- 2010–2011 **Project Director**, Punjab Higher Education Dept., Govt. College, Mankera (Male and Female) Bhakkar, Punjab, Pakistan.
- 2011–2013 **Project Director**, Punjab Higher Education Dept., Govt. College for Women, Behal Bhakkar, Punjab, Pakistan.

Academic Career

- 2018 – 2019 **Postdoc; NANYANG Technological University [NTU], Singapore School of Mechanical and Aerospace Engineering, [MAE]**
Project title: *Thermal Energy Storage and Two-Phase Flow Heat Transfer with Advanced Technology*
- 2005 – 2011 **Ph.D., Mathematics, CASPAM, Bahauddin Zakariya University, Multan, Pakistan**
Thesis title: *Ostrowski Type Inequalities and Applications*
- 2001 – 2004 **M.Phil. Mathematics, CASPAM, Bahauddin Zakariya University, Multan, Pakistan**
Thesis title: *OPTIMIZATION OF FINNED DOUBLE PIPE FOR CONVECTIVE HEAT TRANSFER.*
- 2007 – 2007 **Research Internship, Victoria University, Melbourne, Victoria, Australia**
Dept. of Computer Science and Mathematics
- 1988 – 1990 **M.Sc. Mathematics, Dept. of Mathematics, University of the Punjab, Lahore, Pakistan**
First Class Honours. Outstanding Performance.
- 1991 – 1992 **B.Ed. Bachelor of Teaching/Education, Gomal University D. I. Khan, KPK, Pakistan**
First Class Honours Department Prize for Outstanding Performance.

Editor and Reviewer

- Managing Editor **Science International Lahore, Multidisciplinary Journal.**
- Editor **1. Konuralp Journal of Mathematics, 2. ARPN Journal of Science and Technology, 3. International Journal of Mathematical Education, 4. European Journal of Natural and Applied Sciences, 5. Research Journal of Computation and Mathematics, 6. American Open Advanced Mechanics Journal, 7. American Open Statistic and Mathematics Journal and more than ten journals other than above mentioned.**
- Reviewer **1. Applications and Applied Mathematics: An International Journal (AAM) 2 Journal Computers and Mathematics with Applications, 3. SIAM Journal on Optimization 4. and more than 30 journals.**

Research Publications

Journal Articles from 2004 to 2023

- 1** Hussain, S., Siddique, I., Ali, B., **Ahmad, F.** & Ali, M. (2022). Significance of solar radiation and magnetic dipole impact on micropolar ferromagnetic fluid flow via an extending surface using finite element approach. *Heat Transfer*, [<https://doi.org/10.1002/hjt.22601>] **3.6 Impact Factor**, 2022(ID 17395641), 11–19.
- 2** Wael, M., Shahzad, A., Zahid, R., Jia-Bao, L., **Ahmad, F.** & Elsayed M., E. (2022). On the graphs of minimum degree at least 3 having minimum sum-connectivity index. *Journal of Mathematics*, [<https://doi.org/10.1155/2022/1203303>] **1.555 Impact Factor**, 2022(ID 1203303), 11.
- 3** **Ahmad, F.**, Hassan, W., Ayed, H., Sajjad, H., Shan, F., Shan, A. & Othman, A. (2021). Numerical treatment with lobatto-iiia scheme magneto-thermo-natural convection flow of casson nanofluid configured by stretching cylinder in porous medium multiple slips.

CSITE, [<https://doi.org/10.1016/j.csite.2021.101132>] **6.8 Impact Factor**, 26(August 2021), article No. 101132.

- 4 **Ahmad, F.**, Sajjad, H., Israr, A., Ai-Sawalha, A., Tahier, H., Othman, A. & Ieemaane, F. (2021). Successive melting of a phase change material bounded in a finned trapezoidal domain. *CSITE*, [<https://doi.org/10.1016/j.csite.2021.101419>] **6.8 Impact Factor**, 28(December 2021), article No. 101419.
- 5 **Ahmad, F.**, Sohaib, A., Ayed, H., Sajjad, H., S, S. & Othman, A. (2021). The improved thermal efficiency of maxwell hybrid nanofluid comprising of graphene oxide plus silver / kerosene oil over stretching sheet. *CSITE*, [<https://doi.org/10.1016/j.csite.2021.101257>] **6.8 Impact Factor**, 27(October 2021), article No. 101257.
- 6 Akbar, A., Waqas, I., Zahid, R., Ekram E, A., Jia-Bao, L., **Ahmad, F.** & Qasim, A. (2021). Some vertex/edge-degree-based topological indices of r-apex trees. *Journal of Mathematics*, [<https://doi.org/10.1155/2021/4349074>] **1.555 Impact Factor**, 2021(ID 4349074), 8.
- 7 D, G., S, S., S, J., **Ahmad, F.**, Almatroud, O. & N, K. (2021). Numerical analysis of higher order chemical reaction on electrically mhd nanofluid under influence of viscous dissipation. *Alexandria Engineering Journal*, [<https://doi.org/10.1016/j.aej.2020.11.034>] **Impact Factor**, **6.8**, 60(1), 1861–1871.
- 8 Shafiq, H., **Ahmad, F.**, Ayed, H., Malik, M., Waqas, H., Sawalha, M. & Hussain, S. (2021). Combined magnetic and porosity effects on flow of time-dependent tangent hyperbolic fluid with nanoparticles and motile gyrotactic microorganism past a wedge with second-order slip. *CSITE*, [DOI: <https://doi.org/10.1016/j.csite.2021.100962>] **6.8 Impact Factor**, 26(August 2021), 100962.
- 9 **Ahmad, F.**, Almatroud, O., Hussain, S., Farooq, S. & Roman, U. (2020). Numerical solution of nonlinear diff. equations for heat transfer in micropolar fluids over a stretching domain. *Mathematics*, [DOI: <https://doi.org/10.3390/math8050854>] **Impact Factor 2.6**, 8(5), 1–18.
- 10 **Ahmad, F.**, Hafssa, Y., Zoubir, D., MehmetZeki & Sarikaya. (2020). A sequential nonlinear random fractional differential equation: Existence, uniqueness and new data dependence. *ROMAI JOURNAL*, [<https://rj.romai.ro/arhiva/latest/Yfrah-Dahmani.pdf>] **.01 Impact Factor**, 16(2), 117–135.
- 11 Azam, K., Farooq, S. E., **Ahmad, F.**, Iqbal, M. & Rehman, M. (2020). Applications of extended hadamard k-fractional integral. *IJPAM*, [] **Impact Factor**, 0(0), accepted.
- 12 Farooq, S. E., Almatroud, O. A., Shabir, K., Qaisar, S. & **Ahmad, F.** (2020). New inequalities of simpson's type for differentiable functions via generalized convex function. *Comptes Rendus.Mathématique*, [<https://comptes-rendus.academie-sciences.fr/ojs/mathematique/submissions>] **Impact Factor**, 1.787, 359(2), 137–147.
- 13 Gouari, Y., Dahmani, Z., Farooq, S. E. & **Ahmad, F.** (2020). Fractional singular differential systems of lane–emden type: Existence and uniqueness of solutions. *AXIOMS*, [DOI:<https://doi.org/10.3390/axioms9030095>] **2.2 Impact Factor**, 9(3), 1–18.
- 14 Hassan, W., Imran, M., Hussain, S., **Ahmad, F.**, Khan, I., Kottakkaran Soopy, N. & Almatroud, A. O. (2020). Numerical simulation for bioconvection effects on mhd flow of oldroyd-b nanofluids in a rotating frame stretching horizontally. *Mathematics and Computers in Simulation*, [DOI: <https://doi.org/10.1016/j.matcom.2020.05.030>] **Impact Factor**, **3.63 3.62**, 178, 166–182.
- 15 Jawdat, A., Sajjad, H., **Ahmad, F.**, Almatroud, A. O. & Kamal, N. (2020). Application of differential transformation method for solving prey predator model with holling type i,

Italian Journal of Pure and Applied Mathematics, [DOI:
<http://ijpam.uniud.it/journal/onl2020-43.htm>] *ISI-Clarivate Indexed*, 2020(43), 115–127.

- 16 Khan, F., Akram, S., Hussain, S., Farooq, S., ALAOUI, M. & Ahmad, F. (2020). On stability of nanoparticles to enhance thermal performance of mhd nanofluid flow over a stretchable rotating disk with bioconvection effects nanoparticles to enhance thermal performance. *Digest Journal of Nanomaterials and Biostructures*, [DOI:
http://www.chalcogen.ro/435_Hussain.S.pdf] *Impact Factor 0.963*, 15(2), 435–446.
- 17 Saif, R., Mir, N., Farooq, M., Rizwan, M., Ahmad, F., Shakeel, A. & Babar, A. (2020). Analysis of thermally stratified flow of sutterby nanofluid with zero mass flux condition. *Journal of Materials Research and Technology*, [DOI:
<https://doi.org/10.1016/j.jmrt.2019.11.088>] *Impact Factor 6.26*, 9(2), 1631–1639.
- 18 Ahmad, F., Barnett, N. S. & Dragomir, S. S. (2019). New weighted ostrowski and Čebyšev type inequalities. *Nonlinear Analysis: Theory, Methods & Applications*, published in 2009 [DOI: <https://doi.org/10.1016/j.na.2009.01.178>], *Impact Factor 1.78*, 71(12), e1408–e1412.
- 19 Ahmad, F., Cerone, P., Dragomir, S. & Mir, N. (2019). On some bounds of ostrowski and Čebyšev type. *Journal of Mathematical Inequalities* published in 2010, [DOI: [dx.doi.org/10.7153/jmi-04-07](https://doi.org/10.7153/jmi-04-07)] *Impact Factor 1.219*, 4(1), 53–65.
- 20 Rafiq, A. & Ahmad, F. (2019). On weighted ostrowski type inequalities in $l_{\{1\}}(a, b)$ spaces. *Mathematical Communications*, Published in 2009 [DOI: <https://hrcak.srce.hr/37337>], *ISI-Clarivate Impact Factor 0.905*, 14(1), 27–33.
- 21 Rafiq, A., Hussain, S., Ahmad, F. & Awais, M. (2019). New iterative methods. *Applied mathematics and computation*, published in 2007 [DOI: <https://doi.org/10.1016/j.amc.2006.12.042>], *Impact Factor 4.3472*, 189(2), 1260–1267.
- 22 Rafiq, A., Hussain, S., Ahmad, F., Awais, M. & Zafar, F. (2019). An efficient three-step iterative method with sixth-order convergence for solving nonlinear equations. *International Journal of Computer Mathematics*, Published in 2007 [DOI: <https://doi.org/10.1080/00207160601178521>], *Impact Factor 1.72*, 84(3), 369–375.
- 23 Rafiq, A., Mir, N. A. & Ahmad, F. (2019). Weighted Čebyšev-ostrowski type inequalities. *Applied Mathematics and Mechanics (Eng Edt)* Published in 2007 [DOI: <https://doi.org/10.1007/s10483-007-0707-z>], *Impact Factor 3.707*, 28(7), 901–906.
- 24 SARIKAYA, M. Z., DAHMANI, Z., KIRIS, M. & Ahmad, F. (2019). (k,s)-riemann-liouville fractional integral and applications. *Hacetatepe J Math. & Stat.*, published in 2016 [Doi: [10.15672/HJMS.20164512484](https://doi.org/10.15672/HJMS.20164512484)], *Impact Factor 0.8679*, 45(1), 1–13.
- 25 Set, E., Sarikaya, M. Z. & Ahmad, F. (2019). A generalization of Čebyšev type inequalities for first differentiable mappings. *Miskolc Mathematical Notes* published in 2011 [DOI: <http://mat76.mat.uni-miskolc.hu/mnotes/contents/12/2/>], *Impact Factor 1.22*, 12, 245–253.
- 26 Shahid, Q., Jamshed, N., Saad, I. B., Asma, A., Ahmad, F., Muhammad, I. & Sajjad, H. (2019). Some fractional integral inequalities of type hermite–hadamard through convexity. *Journal of Inequalities and Applications* [DOI: <https://doi.org/10.1186/s13660-019-2054-2>], *Impact Factor 2.491*, 2019(111), 10–20.
- 27 Xiaoling, L., Shahid, Q., Jamshed, N., Saad Ihsan, B., Ahmad, F., Mehwish, B. & Shane, F. (2019). Some results on integral inequalities via riemann–liouville fractional integrals. *Journal of Inequalities and Applications*, [DOI: <https://doi.org/10.1186/s13660-019-2160-1>] *Impact Factor 2.491*, 2019(214), 1–11.

- 28 Dragomir, S. S., Qaisar, S., **Ahmad, F.** & Iqbal, M. (2018). New hermite-hadamard inequalities via fractional integrals, whose absolute values of second derivatives is p-convex. *Journal of Mathematical Inequalities*, [DOI:dx.doi.org/10.7153/jmi-2018-12-50] *Impact Factor 2.225*, 12(3), 655–664.
- 29 Muhammad, K. A., Fiza, Z., Muhammad, A. R., **Ahmad, F.** & Shahid, Q. (2018). Study of extended weyl-fractional integral via chebyshev inequalities. *Italian Journal of Pure and Applied Mathematics*, [DOI: [http://ijpam.uniud.it/online_issue/201839/61 – Azam – Zafar – Rehman – Ahmad – Qaisar.pdf](http://ijpam.uniud.it/online_issue/201839/61-Azam-Zafar-Rehman-Ahmad-Qaisar.pdf)] *ISI-Clarivate Indexed* , 39(0), 771–782.
- 30 Muhammad, K. A., Muhammad, Y., Ghulm, F., Muhmmad, I., **Ahmad, F.** & Muhammad, A. R. (2018). Some results of k fractional derivatives, *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.* 8(1), 225–231.
- 31 Rabia, S., Muhammad, I., Sadiq, N. & **Ahmad, F.** (2018). Unsteady rotational flow of a burgers' fluid through a pipe with non-integer order fractional derivatives, *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.* 8(1), 144–156.
- 32 Saeed, A. M., Rafique, A. M., Muhammad, A. S. & **Ahmad, F.** (2018). Stresses and power consumption analysis of mixing flow in cylindrical shaped container, *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.* 8(1), 241–248.
- 33 Abbas, Q., Ghazala, Z., Zafar, A., Mujahid, A., Dua, Q. & **Ahmad, F.** (2017). Urdu novel technique and tradition. *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.* 7(1), 220–225.
- 34 Asmat, U. Y., Sajjad, H., Danial, H. & **Ahmad, F.** (2017). Computational investigation for stagnation point flow towards a stretching vertical sheet with slip effects, *ISI-Clarivate Indexed Journal, Sci.Int.(Lahore)*, 30(2), 183–186.
- 35 Ayaz, A. S., Rafique, A. M., Nek, M. K. & **Ahmad, F.** (2017). Modified algorithm for solving nonlinear equations in single variable, *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.* 7(5), 166–171.
- 36 Azam, M., Zaffar, F., Rehman, M., **Ahmad, F.** & Qaisar, S. (2017a). Study of extended k-hadamard fractional integral. *Then ISI-Clarivate Indexed, Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.* 7(7), 180–188.
- 37 Azam, M., Zaffar, F., Rehman, M., **Ahmad, F.** & Qaisar, S. (2017b). Study of extended k-hadamard fractional integral. *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.* 7(7), 180–188.
- 38 Danial, H., Muhammad, A. K., **Ahmad, F.** & Sajjad, H. (2017). Partial slip and buoyancy effects on mhd flow through porous medium adjacent to porous accelerated sheet in presence of heat radiation, *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.* 8(1), 169–174.
- 39 Hassan, W., Mariam, A., Shumila, K., **Ahmad, F.** & Sajjad, H. (2017). Radiation effects and chemical reaction on boundary layer flow of electrically conducting casson fluids owing to porous shrinking sheet, *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.* 7(5), 117–125.
- 40 Hassan, W., Rafique, S., Shumila, K., **Ahmad, F.** & Sajjad, H. (2017). Thermal radiation effects on unsteady mhd flow of casson fluids through porous medium over a permeable shrinking sheet. *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.* 7(4), 201–209.
- 41 Hassan, W., Saba, R., Shamila, K., Sajjad, H. & **Ahmad, F.** (2017). The influence of radiation on mhd slip flow and heat transfer of casson fluids due to shrinking sheet

immersed in porous medium, *ISI-Clarivate Indexed Journal, Sci.Int.(Lahore)*, 29(2), 453–457.

- 42 Nazar, A., Qamar, A., Dua, Q., **Ahmad, F.** & Muhammad Afzal, J. (2017). Travelogues of iran in urdu language: Trends and tradition. *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.* 7(3), 279–283.
- 43 Nazar, A., Qamar, A., Muhammad Afzal, J., **Ahmad, F.** & Dua, Q. (2017). Travelogues of turkey in urdu language: Trends and tradition. *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.* 7(6), 236–239.
- 44 Qamar, A., **Ahmad, F.**, Dua, Q., Mujahid, A., Ghazala, Z. & Zafar, A. (2017). Life and work of deputy nazir ahmed: The first novelist of urdu, *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.* 7(4), 214–219.
- 45 Qamar, A., Ghazala, Z., Dua, Q., Zafar, A., **Ahmad, F.** & Mujahid, A. (2017). Important trends of urdu travelogue writing. *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.* 7(3), 263–267.
- 46 Qamar, A., Mujahid, A., **Ahmad, F.**, Zafar, A., Ghazala, Z. & Dua, Q. (2017). The great urdu short story writer ghulam abbas: His life and achievements, *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.* 7(2), 199–203.
- 47 Rafique, A. M., Nek, M. K., Ayaz, A. S., Saeed, A. m. & **Ahmad, F.** (2017). Simulation of industrial rotating mixing flow in a tub, *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.* 7(6), 143–150.
- 48 Shah, N. H., **Ahmad, F.**, Jumani, N. B. & Tariq, M. A. (2017). Influence of organization commitment turnover intention of private secondary school teachers, *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.* 7(3), 244–251.
- 49 Shumila, K., Sajjad, H., Hassan, W. & **Ahmad, F.** (2017). Numerical solution of mhd flow and heat transfer in porous medium over a porous shrinking surface with radiation and viscous dissipation, *ISI-Clarivate Indexed Journal, Sci.Int.(Lahore)*, 28(5), 4297–4302.
- 50 Tahir, A. G., Rizvi, S. A. A., Khan, M. B. & **Ahmad, F.** (2017). Keys of educational marketing. *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.* 7(1), 180–188.
- 51 Tariq, M. A., **Ahmad, F.** & Jumani, N. B. (2017). A study to investigate the reflective activities of in-service teachers for professional development in pakistan: A mixed methods approach. *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.* 7(3), 199–208.
- 52 Yasmeen, Z., Abbas, Q., **Ahmad, F.**, Dua, Q. & Mujahid, A. (2017). Travelogues of russia in urdu language: Trends and tradition. *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.*, 7(5), 177–180.
- 53 Zeba, Y., Qamar, A., **Ahmad, F.**, Mujahid, A. & Dua, Q. (2017). Travelogues of america in urdu language: Trends and tradition. *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.* 7(1), 226–230.
- 54 Zebaa, Y., Qammar, A., Mujahid, A., **Ahmad, F.** & Dua, Q. (2017). Travelogues of england in urdu language trends and tradition. *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.*, 7(2), 211–216.
- 55 Zeeba, Y., Abbas, Q., Abbas, M., Dua, Q. & **Ahmad, F.** (2017). Travelogues of italy in urdu language: Trends and tradition. *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.*, 7(4), 225–229.

- 56 Abbas, Q., **Ahmad, F.** & Imran, M. (2016). Variable learning rate based modification in backpropagation algorithm (mbpa) of artificial neural network for data classification. *ISI-Clarivate Indexed Journal, Sci.Int. (Lahore)*, 28(3), 2369–2380.
- 57 **Ahmad, F.**, Sajjad, H. & Osama, A. A. (2016). Mhd flow in a viscous fluid near a stagnation point over plane porous stretching sheet, *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.*, 6(4), 143–151.
- 58 Azaam, M. K., **Ahmad, F.** & Sarakiya, M. Z. (2016). Applications of integral transforms on some k-fractional integrals. *Then ISI-Clarivate Indexed, J. Appl. Environ. Biol. Sci.*, 6(12), 127–132.
- 59 Azam, M., Rehman, M., **Ahmad, F.**, Farid, G. & Hussain, S. (2016). Applications of k-weyl fractional integral. *Sci. Int. (Lahore)*, *ISI-Clarivate Indexed Journal*, 28(4), 3369–3372.
- 60 Azam, M., Rehman, M., **Ahmad, F.**, Imran, M. & Yaqoob, M. (2016). Integral transforms of k-weyl fractional integrals. *Sci. Int. (Lahore)*, *ISI-Clarivate Indexed Journal*, 28(4), 3287–3290.
- 61 Fawad, H., Wahab, H. A., Adeela, K., Muhammad, G. & **Ahmad, F.** (2016). An application of hpm to steady third grade non-newtonian fluid. *ISI-Clarivate Indexed Journal, Sci.Int. (Lahore)*, 28(5), 4315–4319.
- 62 Gulistan, M., Ahmad, S., Azam, M., Nawaz, S. & **Ahmad, F.** (2016). Regular ag-groupoids in terms of hesitant fuzzy sets. *ISI-Clarivate Indexed Journal, Sci.Int. (Lahore)*, 28(4), 3277–3282.
- 63 Gulistan, M., Shahzad, M., **Ahmad, F.**, Azam, M. & Nawaz, S. (2016). Hesitant fuzzy abel-grassmann's groupoids. *Sci. Int. (Lahore)*, *ISI-Clarivate Indexed Journal*, 28(1), 19–25.
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Skills

- Languages **■** Strong reading, writing, speaking competencies for English, Urdu and Arabic.
- Coding **■** FORTRAN, GW BASIC, Python, MATLAB, \LaTeX , ANSYS, MAPLE.COMSOL, SWP.
- Misc. **■** Academic research, teaching, training, consultation, \LaTeX typesetting.

Miscellaneous

Awards and Achievements

- 1989 **■** **Merit Award**, President Talent Scholar Ship Winner for 1989-90 during M. Sc Math's.
- 1990 **■** **Department Prize** Maths Dept. University of the Punjab, Lahore.

Training from Australia, Singapore and Saudi Arabia

- 2018-19 **■** **TRAINING from NTU, Singapore.** Software MATLAB, COMSOL, EndNote, Latex, Teaching Methodologies, PYTHON.
- 2019 **■** **TRAINING RESTART HEART from Restart Heart Foundation Singapore.** CRP and AEd training.
- **TRAINING EDUCATION/TEACHING from National Institute of Education, NTU, Singapore.** Teaching and Learning etc.
- 2014-16 **■** **TRAINING from MAJMAAH Uni. Saudi Arabia.** Occupational Training of Desire to Learn (D2L).
- 2007 **■** **TRAINING from Vic. Uni. Australia.** Occupational Training for Research and Teaching at School of Computer Science and Mathematics.

Training from Pakistan

- 2009 **■** **TRAINING.** OFFICE MANAGEMENT for OFFICERS of PUNJAB GOVT and DISTRICT OFFICERS, in MPDD, Lahore.
- 2010 **■** **TRAINING.** PUBLIC SERVANT AND ACCOUNTABILITY for OFFICERS of PUNJAB GOVT and DISTRICT OFFICERS, in MPDD, Lahore

Miscellaneous (continued)

- 2013 **TRAINING.** IT Skills and Applications for OFFICERS of PUNJAB GOVT and DISTRICT OFFICERS, in MPDD, Lahore.
- 2009-2013 **TRAINING.** Training of Teachers for Foundation Training Program under National Information Communication Technology Scholarship Program, Islamabad, Pakistan.
- 2016 **TRAINING FOR NEWLY SELECTED PROFESSORS.** Training of Professors who were selected directly through PPSC, Lahore, Pakistan.

Courses Taught

- **Topology Optimization / Coding**, MS/PhD, School of Mechanical and Aerospace Engineering, **Nanyang Technological University, Singapore.**
- **Statistics**, Mathematics Department, College of Sciences, **University of Hail, Hail, Saudi Arabia.**
- **Statistics**, Department of **Actuarial Science, University of Punjab, Lahore, Pakistan**
- **Calculus I and II**, Department of **Actuarial Science, University of Punjab, Lahore, Pakistan**
- **Linear Algebra**, Math – 242/229, Mathematics Department, College of Sciences, **University of Hail, Hail, Saudi Arabia.**
- **Statistics**, College of Sciences, Zulfi, **Majmaah University, Saudi Arabia.**
- **Linear Algebra**, Math – 242/229, College of Sciences, Zulfi, Majmaah University, Saudi Arabia
- **Introduction to ODE**, Math – 321, College of Sciences, Zulfi , Majmaah University, Saudi Arabia.
- **Vector Calculus**, Math-204, University of Sargodha, Govt. Post Graduate College Bhakkar, University of Sargodha Pakistan.
- **Calculus-I**, Math – 201, University of Sargodha, Govt. Post Graduate College Bhakkar, University of Sargodha Pakistan.
- **Mathematical Methods**, Math – 316/3226, University of Sargodha, Govt. Post Graduate College Bhakkar, University of Sargodha Pakistan.
- **Topology**, Math – 471, University of Sargodha, Govt. Post Graduate College Bhakkar, University of Sargodha Pakistan.
- **Mechanics**, Math – 411/412, University of Sargodha, Govt. Post Graduate College Bhakkar, University of Sargodha Pakistan.
- **Vectors Analysis**, Math – 228, University of Sargodha, Govt. Post Graduate College Bhakkar, University of Sargodha Pakistan.
- **Number Theory**, Math – 243, University of Sargodha, Govt. Post Graduate College Bhakkar, University of Sargodha Pakistan.
- **Preparatory Maths**, MTHP002-Z, College of Sciences, Zulfi, Majmaah University, KSA.
- **Differential Geometry**, MATH-472, College of Sciences, Zulfi, Majmaah University, KSA.
- **Preparatory Math**, MTHP 001/002, Consecutive six years, University of Sargodha, Govt. Post Graduate College Bhakkar, University of Sargodha Pakistan.

Conferences and Seminars

Conferences in Pakistan

- 2005 **Conference**, Farooq Ahmad, Arif Rafiq, Nazir Ahmad Mir, Sifat Hussain and Ather Qayyum, “A Generalization of Ostrowski’s Inequality and Applications in Numerical Integration”. Presented in “LUMS International Conference on Mathematics and its Applications in Information Technology, November 27-30, 2005”.
- 2006 **Conference**, International Conference on Technology Based Development STRATEGIES and OPTIONS for Pakistan, (Organized by COMSATS, Institute of information Technology, Islamabad), Aug. 22-23, 2006, Marriot Hotel, Islamabad, Pakistan.
- Conference**, K. S. Syed, Farooq Ahmad and Mazhar Iqbal, Optimal Design of a Finned Double Pipe for Laminar Convection, Presented in “International Conference on Mathematics, September 12-14, 2006” Quid-e-Azam University Islamabad, Pakistan.
- Conference**, International Conference on Technology Based Development STRATEGIES and OPTIONS for Pakistan, (Organized by COMSATS, Institute of information Technology, Islamabad), Aug. 22-23, 2006, Marriot Hotel, Islamabad, Pakistan.
- Conference**, Farooq Ahmad, Arif Rafiq and Nazir Ahmad Mir, Weighted Ostrowski type inequality for thrice differentiable mappings whose third derivatives are bounded, Presented in “International Conference on Mathematics, September 12-14, 2006” Quid-e-Azam University Islamabad, Pakistan.
- 2013 **Conference**, Presented a paper in 6th World Conference on 21st Century Mathematics 2013, School of Mathematical Sciences, G. C. University, Lahore, 6-9, March, 2013.
- 2019 **Conference**, Farooq Ahmad, ON STABILITY OF NANOPARTICLES TO ENHANCE THERMAL PERFORMANCE OF MHD NANOFUID FLOW OVER A STRETCHABLE ROTATING DISK WITH BIOCONVECTION EFFECTS, GCU Faisalabad, February 2019.
- Conference**, Farooq Ahmad, SUCCESSIVE MELTING OF A PHASE CHANGE MATERIAL MIXED WITH NANO INCLUSIONS WHEN BOUNDED IN A FINNED TRAPEZOIDAL DOMAIN, GCU Faisalabad, February 2019.
- 2022 **Conference**, Farooq Ahmad et al. On Stability of Nanoparticles to Enhance Thermal Performance of MHD Nanofluid flow Over a Stretchable Rotating Disk with Bioconvection Effects, Mehran UET, Khairpur, Mir’s, Sindh, Pakistan, March 2022.
- 2023 **Conference**, Farooq Ahmad et al. Nanoparticles to Enhance Thermal Performance of MHD Nanofluid flow Over a Stretchable Rotating Disk with Bioconvection Effects, Thal University, Bhakkar, Punjab, Pakistan, September 2023.
- 2024 **Conference**, Farooq Ahmad et al. Face Change Materials on Topology Optimizations, University of Layyah, Layyah, Punjab, Pakistan, May 2024.

Conferences and Seminars in Australia

- 2007 **Conference**, VAC25, Twenty Fifth Victorian Algebra Conference, September 23–24, 2007, Department of Mathematics and Statistics, La-Trobe University, Melbourne, Victoria 3086, Australia.
- Conference**, International Conference and The 51st Annual Meeting of the Australian Mathematical Society, September 25-28, 2007, Department of Mathematics and Statistics, La-Trobe University, Melbourne, Victoria 3086, Australia.

Conferences and Seminars (continued)

- **Seminar**, Farooq Ahmad, “Generalization of Ostrowski, Grüss, Čebyšev Type Inequalities for the Functions Whose Modulus of Derivatives is Convex”. Presented in “RGMIA Seminar Series 3rd September 2007, Victoria University, Melbourne, Australia.
- **Seminar**, Farooq Ahmad, “On Weighted Ostrowski, Weight Ostrowski-Grüss and New Ostrowski-Grüss Type Inequalities”. Presented in “RGMIA Seminar Series 13th August 2007, Victoria University, Melbourne, Australia.

Conferences in America

- 2008 ■ **Conference**, Fifth World Congress of Nonlinear Analysts, WCNA 2008, USA, IFNA, Florida Institute of Technology, Mathematical Sciences, Melbourne, FL 32901, USA, Paper published, Farooq Ahmad, N. S. Barnett and S. S. Dragomir, New Weighted Ostrowski and Čebyšev Type Inequalities, *Nonlinear Analysis: Theory, Methods and Applications*, 71 (12), (2009), e1408-e1412.* date: 02-07-2008 to 09-07-2008.

Seminar in Saudi Arabia

- 2015 ■ **Seminar**, Farooq Ahmad, Flow through Channal, International Seminar Series on Heat and Mass transfer, 2015, Mathematics Department, College of Science, Alzulfi, Majmaah University, KSA.

ICIAM 2019 Congress in Valencia, Spain

- 2019 ■ **ICIAM 2019 Congress**, Farooq Ahmad, Numerical Solution of Non-Linear Differential Equations for Unsteady Flow of Micropolar Fluids in a Porous Stretching Domain With Joulean Dissipation, ICIAM 2019 Congress Valencia, Spain.

Seminar in Turkey

- **Seminar**, Farooq Ahmad, A Numerical Approximation for Micropolar Fluids Motion With Heat Transfer Through Porous Medium Over Stretching Sheet, Düzce University, Art and Sciences Faculty, Department of Mathematics, Konuralp Campus, Düzce/Turkey.

Seminar in Turkey

- **Seminar**, Farooq Ahmad, A Numerical Approximation for Micropolar Fluids, Rome, Italy.

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