MUHAMMAD ASIF s/o ABDUL SATTAR

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&
Centre for Advanced Studies in Pure and Applied Mathematics,
Baha-ud-Din Zakariya University, Multan – Pakistan
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Personal:

Born in Lahore, Pakistan.
Date of Birth: Jan 07, 1975.
NIC #: 35201-1217821-3.
Religion: Islam.
Marital Status: Married.
Covid-19 Immunization Status: Fully Vaccinated.

Academic Qualification:

Ph.D (2009)
Mathematics, Functional Analysis, Harmonic Analysis.
Abdus Salam School of Mathematical Sciences, GC University, Lahore, Pakistan.

Doctoral details:

Started Ph.D. in 2004 under HEC scholarship. I defended my thesis on April 02, 2009.

Research Interests:

Functional Analysis, Harmonic Analysis.

Job Experience

22-08-2020 onwards
Associate Professor at
Centre for Advanced Studies in Pure and Applied Mathematics,
Bahauddin Zakariya University, Multan.

29-04-2009 to 21-08-2020
Assistant Professor at
Centre for Advanced Studies in Pure and Applied Mathematics,
Bahauddin Zakariya University, Multan.

21-10-2003 to 30-04-2004
Aitchison College Lahore.

Teaching Experience:

- **Ph. D. Mathematics:** Advanced Functional Analysis-I , Topics in Harmonic Analysis.

- **M. Phil Mathematics:** Functional Analysis-II, Theory of Rings-I.

- **BS/M. Sc. Mathematics:** Calculus-I, Calculus-II, Functional Analysis-I, Abstract Algebra, Algebra-I, Algebra-II, Measure Theory-I, Mathematical Statistics, Introduction to Mathematical Methods, Complex Analysis, Mathematical Spaces, Real Analysis-I, Real Analysis-II.

Students Supervised:

MS/M.Phil. (a) Under supervision 03 (b) Completed **24**

Ph.D. (a) under supervision 04 (b) Completed **02**.

Sr. #	Name	Title of Thesis	Class
1.	Mr. Muhammad Ibrahim	Total irregularity strength of graph labeling **(Completed)**	Ph. D.
2.	Mr. Khurrum Ferhad Khan	On dynamic equations and inequalities for interval-valued functions **(Completed)**	Ph. D.
3.	Mr. Khurrum Ferhad Khan	On the essential norm of potential operators	M. Phil
4.	Mr. Emad-ud-Din Javed	Star-shapedness and Co-star-shapedness of unions and intersections of Closed Half-spaces.	M. Phil
5.	Mr. Muhammad Ishaq	Super-edge-magic total labelling of disjoint union of banana tree with path and comb	M. Phil
6.	Arslan Afzal	Measure of non-compactness for some integral operators	M. Phil
7.	Muhammad Murtaza	On randomly k-determined graphs	M. Phil
8.	Khola Wahid	On wavelet frames and multi-resolution analysis	M. Phil
9.	Asma Qamar	Fault tolerant resolving sets in Lexicographic product of graphs	M. Phil
10.	Aisha Batool	On zero forcing number of some families of graphs	M. Phil
11.	Muhammad Kashif Maqbool	Star Schreier domains	M. Phil
12.	Pervaiz Akhtar	Star almost condensed domains	M. Phil
13.	Muhammad Sajjad	Qualitative properties of Riemann Liouville's fractional differential equation in continuous and discrete domain.	M. Phil
14.	Hasnain Abbas	Qualitative properties of Caputo-type differential equation in continuous and discrete domain.	M. Phil
15.	Misbah Aftab	Some existence and uniqueness results for Caputo-type fractional differential equation in q-calculus	M. Phil
16.	Imran Sajid	Some properties of Conformable fractional calculus	M. Phil
17.	Suhail Nawaz	Basic Results and Properties of fractional Sobolev's spaces	M. Phil
18.	Muhammad Asad	A brief overview of interval-valued functions involving conformable fractional derivative	M. Phil
19.	Ghanzanfar Ali	Necessary and sufficient conditions for interval -valued functionals	M. Phil
20.	Muhammad Umer Azam	Metric Modular Space Structures on IR and its Properties	M. Phil

21.	Ali Abbas	Set-valued Matrix Equations and Some Related Results	M. Phil
22.	Shahid Abbas	Some Theoretical Properties of Set Matrices	M. Phil
23.	Muhammad Amir	Some Hermite-Hadamard Type Inequalities for Fuzzy-valued Functions	M. Phil
24.	Saddam Hussain	Some Integral Inequalities for Interval-valued Functions Involving Conformable Derivatives	M. Phil

Research Publications:

- Ali Abbas, Ghaus ur Rahman, Muhammad Shoaib Arif, Kamaleldin Abodayeh, Muhammad Asif, Dynamical aspects of poliomyelitis disease via non-singular fractional differential equations: mathematical and biological aspects, Boundary Value Problems, Online ISSN (e-ISSN): 1687-2770, https://link.springer.com/article/10.1186/s13661-025-02171-y

- Shahid Abbas, J. F. Gómez-Aguilar, Ghaus ur Rahman, and Muhammad Asif, Modeling the Mechanisms of Methamphetamine Abuse Transmission with Immigration Impact and Relapse, *Eur. Phys. J. Plus*, - ISSN: 2190-5444, (2023), 138:484, https://doi.org/10.1140/epjp/s13360-023-04122-x.

- Awais Younus, Muhammad Asif, Usama Atta, Tehmina Bashir, and Thabet Abdeljawad, Applications of fuzzy conformable Laplace transforms for solving fuzzy conformable differential equations, *Soft Computing* ISSN*:* 1432-7643, (2023) 27:8583–8597, https://doi.org/10.1007/s00500-023-08181-1

- Awais Younus, Muhammad Umar Azam, Muhammad Asif and Gulnaz Atta, Fixed Point Theorems for Self and Non-self Contractions in Modular Metric Spaces Endowed with a Graph, Palestine Journal of Mathematics, ISSN:2219-5688 11(1): 385-396, 2022.

- Awais Younus, Muhammad Asif and Khurrum Farhad, Interval-valued Fractional q-calculus and Applications, Information Sciences, 569(2021) 241-263.

- Awais Younus, Muhammad Asif, Jehad Alzabut, Abdul Ghaffar and Kottakkaran Sooppy Nisar, A New Approach to Interval-valued Inequalities, *Advances in Differential Equations*, (2020) 2020:319, 14 pages, https://doi.org/10.1186/s13662-020-02781-z .

- Awais Younus and Muhammad Asif, Input Distinguishability of Linear Dynamic Control Systems, *Journal of Taibah University for Science*, 13 (1) (2019), 1100-1107.

- A. Younus, M. Asif, K. Farhad and O. Nisar, Some New Variants of Interval-valued Gronwall type Inequalities on Time Scales, Iranian Journal of Fuzzy Systems, 16 (2019), No. 5, 187-198.

- M. Ibrahim, M. Asif, A. Ahmad and M. K. Siddiqui, Computing the Total Irregularity Strength of Wheel Related Graphs, *Utilitas Mathematica.,*108(2018), 321-338.

- I. Javaid, M. Murtaza, M. Asif and F. Iftikhar, On the Fixed Number of Graphs, *Bull. Iranian Math. Soc*. 43(2017), No. 7, 2281-2292.

- Usman Ali, Abdul Qudair Baig, Muhammad Imran, Ghulam Abbas, and Muhammad Asif, On

Topological Properties of Certain Boron Nanostructures, *Journal of Computational and Theoretical Nanoscience*, 14(2017), 887-898.

- Awais Younus, Muhammad Asif and Khurram Farhad, On Gronwall Type Inequalities for Interval-valued Functions on Time Scales, *Journal of Inequalities and Applications*, (2015) 2015:271, doi: 10.1186/s13660-015-0797-y.

- Kashif Ali, Shabbir Ahmad, Shahzad Ahmad, Muhammad Ashraf and Muhammad Asif, On the Interaction Between External Magnetic Field and the Nanofluid Inside a Vertical Square Duct, *AIP Advances*, 5, 107120 (2015); doi: 10.1063/1.4934484.

- Usman Ashraf, Muhammad Asif, Alexander Meskhi, Kernel Operators on the upper-half Space: Boundedness and Compactness Criteria, Turkish Journal of Mathematics, 38(2014), 119-135.

- Mudassar Nazar, Muhammad Zulqarnain, Muhammad Saeed Akram, Muhammad Asif, Flow Through an Ocillating Rectangular Duct for Generalized Maxwell Fluid with Fractional Derivatives, Commun. Nonlinear Sci. Numer. Simulat., 17(2012), 3219-3234.

- U Ashraf. M. Asif, Two-weight Estimates for Kernel Operators Defined on Cones in Homogeneous Groups, Proc. A. Razmadze Math. Inst., 154(2010), 37-52.

- M. Asif, V. Kokilashvili and A. Meskhi, Boundedness criteria for maximal functions and potentials on the half –space in weighted Lebesgue spaces with variable exponents, *Int. Transf. Spec. Funct*. 20(2009), No. 11, 805-819.

- U Ashraf. M. Asif and A. Meskhi, Boundedness and compactness of positive integral operators on cones of homogeneous groups, Positivity, 13(2009), 497-518.

- M. Asif and A. Meskhi, Weighted estimates of a measure of noncompactness for maximal and potential operators, *J. Inequal. Appl.* 2008, Art. ID 697407, 19 pages.

- M. Asif and A. Meskhi, On the essential norm for the Hilbert transforms in $L^{p(x)}$ spaces, *Georgian Math. J*., 15(2008), No. 2, 208-223.

- U Ashraf. M. Asif and A. Meskhi, On a class of bounded and compact higher dimensional kernel operators, Proc. A. Razmadze Math. Inst., 144(2007), 121-125.

Professional Development:

I have presented a paper in following conferences:

- *4th World Conference on 21st Century Mathematics 2009* held in Abdus Salam School of Mathematical Sciences, GC University Lahore-Pakistan on March 04-08, 2009.

- *LUMS International Conference on Mathematics and its applications in Information Technology* held in LUMS on March 9-12, 2008.

- *3rd International Conference on 21st Century Mathematics 2007* held in Abdus Salam School of Mathematical Sciences, GC University Lahore-Pakistan on March 05-07, 2007.

I have attended following conferences/workshops

- Attended “CASPAM International Conference on Mathematics and Applications 2017 (CICMA 2017)”, November 6-7, 2017” CASPAM, BZU Multan.
- Attended “5th International Conference on 21st Century Mathematics, February 9-13, 2011”, Abdus Salam School of Mathematical Sciences GCU Lahore.

- *2nd International Conference on 21st Century Mathematics 2005* held in Abdus Salam School of Mathematical Sciences on March 04-06, 2005.

- *The School on Graph Theory* held in Abdus Salam School of Mathematical Sciences on March 07-19, 2005.

- *LUMS International Conference on Mathematics and its applications in Information Technology* held in LUMS on Nov. 27-30, 2005.

Seminar Presentations:

- Seminars with M. Phil/Ph. D Students in CASPAM, B. Z. U. Multan.
- Presented Seminar: in the seminar series on Analysis 2007 organized by National Center for Mathematics, GC University, Lahore.

- Presented Seminars: on Fundamentals of Harmonic Analysis 2008, held in Abdus Salam School of Mathematical Sciences, supervised by Dr. Alexander Meskhi.

Examiner of Universities/member board of studies etc.:

National. 02 International. None

1- NFC Institute of Engineering and Technology, Multan.

2- Punjab Public Service Commission.

Community Service:

1- Membership of professional societies: One

2- Administrative Assignments in Department and University: Coordinator BS (4 year), Secretary Admission Committee for BS 4-year program and Incharge Examinations

Detail

Served as coordinator and Secretary Admission Committee for BS (4 year) program at CASPAM, B. Z. U. Multan, April 2009 to September 09, 2014 and Incharge Examination from June2015 till to date.

3- Membership of university committees: 4 (BS Admission Committee, Curriculum Revision Committee and Premises Committee for CRSOM, Synopsis Evaluation Committee, Examination Committee)

3-Management of Social events:

1- 06 (CASPAM Regional Student Olympiad of Mathematics)
2- "CASPAM International Conference on Mathematics and Applications 2017 (CICMA 2017)", November 6-7, 2017" CASPAM, BZU Multan

Hobbies Computer networking etc.

Language skills: I can communicate in English in both written and oral forms. I have taken a course on professional communication in English from two professional American Professors; Prof. Dr. Phil Backlund and Prof. Judy Backlund. In that course, we covered presentation skills, professional interviewing and English grammar.

International References:

Prof. Dr. Alexander Meskhi
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