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Academic Qualifications:

1. M.Sc. (Mathematics) from Kanpur University in 1970 with First Division and Second Position securing 567/800 marks.
2. M.Phil. (Pure Mathematics) from Aligarh Muslim University, Aligarh in 1976.
3. Ph.D. on a thesis entitled "A Study of Schauder Decompositions and Best Approximations in Banach Spaces" from University of Delhi in 1982.

Teaching Experience:

S. No.	Position Held	Name of Institution	From	To
1.	Professor	Al-Falah University, Faridabad	05.08.2014	Till date
2.	Professor	Jamia Millia Islamia, New Delhi	17.05.1994	31.07.2014
3.	Professor	Yarmouk University, Irbid, Jordan	03.09.1998	31.08.1999
4.	Reader	Jamia Millia Islamia, New Delhi	01.08.1983	16.05.1994
5.	Lecturer	Jamia Millia Islamia, New Delhi	01.08.1975	31.07.1983
6.	Lecturer	Aligarh Muslim University, Aligarh	13.11.1972	02.05.1973
7.	Lecturer	D.A.V. College, Kanpur (Kanpur University)	04.09.1971	30.06.1972
8.	Lecturer	D.A.V. College, Kanpur (Kanpur University)	01.11.1970	31.05.1971

Courses Taught:

- a) Undergraduate:

Calculus, Analytical Geometry, Vector Analysis, Algebra, Real Analysis, Differential Equations, Mechanics, Complex Analysis, Metric Spaces.

b) Postgraduate:

Topology, Functional Analysis, Complex Analysis, Linear Algebra, Measure Theory, Wavelet Analysis.

In addition, research seminars on various topics in Functional Analysis, Topological groups and wavelet analysis have been given in Jamia Millia Islamia, University of Delhi, A.M.U. Aligarh and Yarmouk University, Irbid, Jordan.

Field of Specialization:

Functional Analysis and Applicable Mathematics. The precise topics of my research are:

1. Theory of Bases and Decompositions of Banach Spaces.
2. Best Approximations in Banach Spaces.
3. Variational Inequalities.
4. Complementarity Problems.
5. Wavelet Analysis and Applications.

Details of Published Research Papers, Books, Monographs and Journals:

See Annexure - 1

Research Guidance:

So far, fifteen scholars have been awarded Ph.D. degrees, under my supervision, from Jamia Millia Islamia on their theses entitled against their names.

1. Othman S.Y. Shahwan: A Study of Transfinite Bases in Banach Spaces, August 1987.
2. Abdullah M. Jarrah: A Study of Bases in Topological Vector Spaces, November 1990.
3. Akhtar Ali Khan: On the Regularization of some Incompletely Posed Variational Inequalities, October 1993.
4. Nafeesurrahman: On Quasivariational Inequalities and Complementarity Problems, February 1995.
5. Zafar Ahmad Siddiqui: A Study of Variational Inequalities and Complementarity Problems, December 1997.
6. Rakesh Kumar: On Certain Problems Concerning Wavelet Packets, July 1998.
7. Tarun Kumar Garg: A Study of Wavelet Packets, July 1998.
8. Rajesh Hasija: On Certain Weighted Integral Inequalities of Hardy Type, December 2002 (Pankaj Jain Co-supervisor).
9. Abdullah: A Study of Function Spaces using Wavelet Packets, November 2006.
10. Firdous Ahmad Shah: A Study of Multiwavelet Packets, November 2006.
11. Pankaj Sharma: On Some Aspects of Wavelets and Its Applications in Speech Analysis, December 2010.
12. Afroz: Wavelets and its Applications in Biomedical Signal Processing, January 2011.
13. Kashif Khan: Applications of Wavelets in Signal Processing, January 2013.
14. Sohrab Ali: A Study of Wavelet Packets and Non-Uniform Wavelet Packets, February 2013.
15. Akmal Raza: A Study on Applications of Wavelets, June 2021.

Other Academic Activities:

1. **Reviewer** of research papers sent by Mathematical Reviews, American Mathematical Society and Zentralblatt fur Matematik (West Germany).
2. **Referee** for research papers to be published in various journals from India and abroad.

Research Grants:

1. Received a grant of Rs. 3,500.00 from the University Grants Commission, India vide letter No. F. 25-3(8727)/77 (SR-I) dated 09.01.1978.
2. Received a grant of Rs. 4,500.00 from the University Grants Commission, India vide letter No. F. 25-3(12351)/82 (SR-I) dated 25.02.1982.
3. Received a grant of Rs. 15,000.00 from the University Grants Commission, India vide letter No. F. 8-5(52)/87 (SR-II) dated 11.03.1988.
4. Received a grant of Rs. 12,000.00 from Jamia Millia Islamia vide letter No. F.AC. - 6(5)3/ dated 25.02.1994.

Summer Institute, Refresher or Orientation Courses Attended:

Attended the Summer Institute in Mathematics for College/University Teachers held under the auspices of the University Grants Commission at Kurukshetra University from May 8 to June 17, 1972. Courses of various branches of Mathematics like Topology, Functional Analysis, Measure Theory, Special Functions, Numerical Analysis, Calculus of Variations etc. were given by experts.

Membership or Fellowship of Professional/Academic Bodies/ Societies etc.:

1. Indian Mathematical Society - Life Member.
2. Indian Society of Industrial and Applied Mathematics - Founder Member.
3. Jammu Mathematical Society – Life Member.
4. Gwalior Academy of Mathematical Sciences - Life Member.

Participation in Conferences/Seminars/Workshops:

See Annexure - II

Lectures delivered:

See Annexure - III

Contribution to the Corporate life of the Institution:

See Annexure - IV

Conferences/Seminars/Workshops organized:

See Annexure - V

List of Publications

Research Papers:

1. Best approximation in Banach spaces with unconditional Schauder decompositions (with P.K. Jain). *Acta. Sci. Math.* 42(1980), 275-279.
2. Best approximation in Banach spaces with Schauder decompositions (with P.K. Jain). *Tamkang J. Math.* 12(1981), 59-66.
3. Certain characterizations of Schauder decompositions in Banach spaces (with P.K. Jain). *Analele Matematiche*, 19(1981), 61-66.
4. Unconditional Schauder decomposition and best approximation in Banach spaces (with P.K. Jain). *Indian J. Pure Appl. Math.* 12(1981), 1456-1467.
5. A note on boundedly complete decomposition of a Banach space (with P.K. Jain and S. M. Maskey). *Acta Sci. Math.* 44(1982), 365-369.
6. Characterisations of Schauder decomposition in Banach spaces (with S.M. Maskey). *Acta. Math. Hungr.* 41(1983), 283-290.
7. Extended decompositions of topological vector spaces (with P.K. Jain). *Nep. Math. Soc. Rep.* 10(1985), 87-94.
8. Domination of sequences of subspaces in Banach spaces (with P.K. Jain and S.M. Maskey). *Analele Matematiche*, 24(1986), 34-42.
9. Domination and equivalence of sequences of subspaces in dual spaces (with P.K. Jain and S.M. Maskey) *Czechoslovak. Math. J.* 36(1986), 351-357.
10. Schauder decomposition and best approximation in Banach spaces (with P.K. Jain). *Portugal. Math.* 44(1987), 25-39.
11. A note on transfinite basis in Banach spaces (with P. K.Jain). *Tamkang J. Math.* 19(1988), 1-5.
12. A note on equivalence of sequences of subspaces in Banach spaces. *Analele Matematiche*, 27(1989), 9-12.
13. Quasi-boundedly complete and shrinking minimal sequences of subspaces of a Banach space (with P.K. Jain) in "Invariant subspaces and allied topics" (Helson and Yadav), 99-102, Narosa Publishing House, New Delhi (1990).
14. Block sequences of subspaces of a Banach space (with P.K. Jain and S. M. Maskey). *Atti. Sem. Mat. Fis. Univ. Modena*, 39(1991), 413-417.
15. A note on Schauder decomposition and best approximation. *Analele Matematiche*, 29(1991), 103-107.
16. Auxiliary problem principle extended to complementarity problems (with Akhtar A. Khan). *Analele Matematiche*, 30(1992), 137-145.
17. Fixed point technique for implicit complementarity problem in Hilbert Lattice (with K.R. Kazmi and N. Rehman). *J. Optim. Theory Appl.* 93(1997), 67-72.
18. On a class of general variational inequalities (with K.R. Kazmi and Z.A. Siddiqui). *Indian J. Pure Appl. Math.* 28(4) (1997), 487-499.
19. Nonconvex mappings and vector variational-like inequalities (with K.R. Kazmi) in "Industrial and Applied Mathematics" (A.H. Siddiqui and K. Ahmad Eds.), 103-115, Narosa Publishing House, New Delhi, London (1998).
20. Study of variational inequalities with monotone operators (with Akhtar A. Khan) in "Industrial and Applied Mathematics" (A.H. Siddiqui and K. Ahmad Eds.), 116-127, Narosa Publishing House, New Delhi, London (1998).
21. Solution of variational inequalities by operator method of regularization (with Akhtar A. Khan) in "Functional Analysis-Selected Topics" (P.K. Jain Ed.), 151-162, Narosa Publishing House, New Delhi (1998).
22. An Ishikawa iterative algorithm with errors for strongly nonlinear complementarity problem (with K.R. Kazmi and Z.A. Siddiqui). *Far East J. Math.* 1998.

23. Pointwise convergence of wavelet packet series (with R. Kumar). Atti Sem. Mat. Fis. Univ. Modena, 47(2000), 107-120.
24. Band-limited wavelet packets (with R. Kumar) in "Mathematics and its Applications in Industry and Business" (A. H. Siddiqi and K. Ahmad Eds.), 1-16, Narosa Publishing House, New Delhi, London (2000).
25. On Fourier transforms of wavelet packets (with R. Kumar and L. Debnath). Zeit. Anal. Anwend. 20(2001), 579-588.
26. Minimally supported frequency wavelet packets (with A. M. Jarrah) in "Current Trends in Industrial and Applied Mathematics" (P. Manchanda et al. Eds.), 223-227, Anamaya Publishers, New Delhi (2002).
27. Certain characterizations of wavelet packets (with A. M. Jarrah and Rakesh Kumar), Atti Sem. Mat. Fis. Univ. Modena, 53(2005), 147-164.
28. Existence of unconditional wavelet packet bases for the spaces $L^p(R)$ and $H^l(R)$ (with R. Kumar and L. Debnath). Taiwanese J. Math., 10(2006), 851-863.
29. Characterisations of Lebesgue spaces $L^p(R)$ using wavelet packets (with T.K. Garg and Abdullah) in "Modern Mathematical Models, Methods and Algorithms for Real World Systems" (A.H. Siddiqi et al. Eds.), 302-317, Anamaya Publishers, New Delhi (2006) and Anshan Ltd., U.K. (2006).
30. Certain results on wavelet packets (with Abdullah). J. Anal. Appl., 4(2006), 179-199.
31. On the partial sums of wavelet packet series (with Firdous Ahmad Shah). International J. Pure Appl. Math., 36(2007), 461-470.
32. Sobolev spaces $L^{p,s}(R)$ and wavelet packets (with Abdullah and Firdous Ahmad Shah). Aligarh Bull. Math., 27(2008), 23-36.
33. Noise reduction in speech signal using thresholding in wavelet transform domain (with Z.A. Jaffery and Pankaj Sharma). International Journal of Applied Engineering Research, 14(2010), 2503-2509.
34. Estimation of Speech Signal in the presence of White Noise using Wavelet Transform (with Z.A. Jaffery and Pankaj Sharma). Proc. of Int. Conf. on Control, Communication and Power Engineering 2010 (ACEEE), 320-322.
35. Performance comparison of wavelet threshold estimators for ECG signal denoising (with Z.A. Jaffery and Afroz) in International Conference on Advances in Recent Technologies in Communication and Computing 2010 (IEEE), 248-251.
36. Applications of wavelet packets in speech denoising (with Z. A. Jaffery and Pankaj Sharma). JMI International J. Math. Sci., 1(2) (2010), 44-53.
37. Characterization of multiwavelet packets in $L^2(R^d)$ (with Firdous Ahmad Shah). Jordan J. Math. Stat., 3(3) (2010), 159-180.
38. Characterisation of Hardy space $H^l(R)$ using wavelet packets (with T.K. Garg and Abdullah) in "Modern Methods in Analysis and its Applications" (Mursaleen, Ed.), 274-288, Anamaya Publishers, new Delhi (2011).
39. Behaviour of shrinkage operators on wavelet packet series (with Firdous Ahmad Shah and Abdullah). Southeast Asian Bull. Math. 35(2011), 1-2.
40. Denoising of ECG signal using wavelet transform (with Z. A. Jaffery and Afroz). JMI International J. Math. Sci., 2(1) (2011), 26-33.
41. Convolution bounds and convergence of wavelet packet series (with R. Kumar and A. Kumar) in "Recent Trends in Mathematics and its Applications" (M.R. Khan et al. Eds.), 55-69, World Education Publishers, New Delhi (2012).
42. Characterisation of dual multiwavelet packets associated with arbitrary dilation matrices (with Firdous Ahmad Shah) in "Recent Trends in Mathematics and its Applications" (M.R. Khan et al. Eds.), 32-47, World Education Publishers, New Delhi (2012).
43. Applications of wavelets in image denoising (with Kashif Khan and Pankaj Sharma). J. Bioinf. Intell. Control (U.S.A.), 1(2) (2013), 171-174.

44. Selection of optimal decomposition level based on entropy for speech denoising using wavelet packet (with Z.A. Jaffery and Pankaj Sharma). *J. Bioinf. Intell. Control (U.S.A.)*, 1(2) (2013), 196-202.
45. Image denoising using local contrast and adaptive mean in wavelet transform domain (with Pankaj Sharma and Kashif Khan). *Int. J. Wavelets, Multiresolut. Inf. Process.*, 12(6) (2014), 1450038 (15 pages). DOI: 10.1142/S0219691314500386.
46. ECG baseline drift elimination using wavelet packets transform (with Z. A. Jaffery and Afroz). *Aust. J. Basic & Appl. Sci.*, 8(3) (2014), 459-466.
47. Applications of wavelet packets in image denoising (with Pankaj Sharma and Kashif Khan). *Aust. J. Basic & Appl. Sci.*, 9(31) (2015), 594-599.
48. Characterisation of Sobolev spaces using M-band framelet packets (with Firdous Ahmad Shah and Humaira Siddiqui) in "Differential Geometry, Functional Analysis and Applications" (M.H. Shahid et al. Eds.), 119-132, Narosa Publishing House, New Delhi (2015).
49. Image denoising method based on local neighbourhood and modified mean in wavelet packet domain (with Pankaj Sharma and Kashif Khan). *Global Sci-Tech*, 9(3) (2017), 129-137.
50. Solution of singularly perturbed differential difference equations and convection delayed dominated diffusion equations using Haar wavelet (with Akmal Raza, Arshad Khan and Pankaj Sharma). *Math. Sci (Springer)*, 15(2) (2021), 123-136.
51. A new approach for solving partial differential equations based on finite difference Haar wavelet methods (with Akmal Raza and Arshad Khan). *Jordan J. Math. Stat.*, 14(2) (2021), 307-334.
52. Solution of partially singularly perturbed system of initial and boundary value problems using non-uniform Haar wavelet (with Akmal Raza and Arshad Khan). *TWMS J. Appl. And Eng. Math.* V. 11, N. 4(2021), 1246-1259.
53. A novel approach for denoising images based on diffusion equation using wavelets (with Akmal Raza and Arshad Khan) (Accepted).
54. Modeling analysis and cure of cancer by X-ray therapy (with Tanveer Ahmad, Ram Singh and Attiqul Rehman). *Global Sci,-Tech*, 13(3-4), (2021), 101-123.
55. Modeling, analysis and optimal control to co-dynamics of HIV/AIDS-TB diseases in homogeneous population (with Tanveer Ahmad, Ram Singh and Attiqul Rehman). *Jordan J. Math., Stat.*, 15(3B) (2022), 741-771.
56. Mathematical modeling and analysis of COVID-19 and tuberculosis transmission dynamics (with Ram Singh et al). *Information in Medicine Unlocked*, 101235, 2023.

Books:

1. Text Book of Analytical Geometry of Two Dimensions (with P. K. Jain). Wiley Eastern Ltd. New Delhi (1983).
2. Text Book of Analytical Geometry of Three Dimensions (with P. K. Jain). Wiley Eastern Ltd. New Delhi (1985).
3. Metric Spaces (with P.K. Jain). Narosa Publishing House, New Delhi (1993).
4. Industrial and Applied Mathematics (with A.H. Siddiqi). Narosa Publishing House, New Delhi, London (1998).
5. Mathematics and its Applications in Industry and Business (with A.H. Siddiqi). Narosa Publishing House, New Delhi, London (2000).
6. Current Trends in Industrial and Applied Mathematics (with P. Manchanda and A.H. Siddiqi). Anamaya Publishers, New Delhi (2002).
7. Introduction to Functional Analysis with Applications (with A. H. Siddiqi and P. Manchanda). Anshan Ltd., UK (2006).
8. Recent Trends in Mathematics and its Applications (with M.R. Khan, Shehzad Hasan and Arshad Khan). World Education Publishers, New Delhi (2012).

9. Applied Mathematics and Computational Physics (with Rakesh Kumar, Anil Kumar and Nagendra Kumar). World Education Publishers, New Delhi (2013).
10. Introduction to Wavelets with Applications (with Firdous Ahmad Shah). Real World Education Publishers, New Delhi (2013).
11. Text Book of Analytical Geometry (with P. K. Jain). Third Edition. New Age International (P) Ltd. Publishers, New Delhi (2014).
12. Text Book of Differential Equations. Real World Education Publishers, New Delhi (2014).
13. Differential Geometry, Functional Analysis and Applications (with Mohammad Hasan Shahid, Sharfuddin Ahmad, M. Rais Khan and Khursheed Haider). Narosa Publishing House, New Delhi, London (2015).
14. Wavelet Packets and Their Statistical Applications (with Abdullah). Springer Nature Singapore Pte. Ltd., (2018).
15. Introduction to Topology. Narosa Publishing House, New Delhi, London (2019).
16. Text Book of Calculus(with Pankaj Sharma). New Age International (P) Ltd. Publishers, New Delhi (2023).

Journals:

1. Indian Journal of Industrial and Applied Mathematics-Managing Editor, Anamaya Publishers, New Delhi (2008) and Taylor & Francis Group, U.K. (2009).
2. JMI International Journal of Mathematical Sciences-Managing Editor, Published by Department of Mathematics, Jamia Millia Islamia, New Delhi, India (2010).
3. Global Sci. Tech.-Editor, Published by Al-Falah University, Faridabad and indianjournals.com, New Delhi, India (2015).

Annexure - II

Participation in Conferences/Seminars/Workshops:

1. Participated in "Seminar on Functional Analysis and its Applications" held at A.M.U. Aligarh in April 1977.
2. Participated and presented papers titled "Certain Characterizations of Schauder Decompositions in Banach Spaces" and "Unconditional Schauder Decompositions and Best Approximations in Banach Spaces" in 45 th Annual Conference of "Indian Mathematical Society" held at Ranchi University during December 28-30, 1979.
3. Participated in "International Symposium on Modern Analysis and its Applications" held at I.I.T. Delhi during December 21-24, 1983.
4. Participated in "Indian Science Congress" held at Lucknow University during January 3-8, 1985.
5. Participated in "Indian Science Congress" held at University of Delhi during January 3-8, 1986.
6. Participated and presented a paper titled "Quasi-boundedly Complete and Shrinking Minimal Sequences of Subspaces of a Banach Space" in "International Conference on Invariant Subspaces and Allied Topics" held at University of Delhi during December 15-19, 1986.
7. Participated in 53rd Annual Conference of "Indian Mathematical Society" held at Gorakhpur University during December 30 - January 2, 1988.
8. Participated and presented a paper titled "A Note on Equivalence of Sequences of Subspaces in Banach Spaces" in 54th Annual Conference of Indian Mathematical Society held at University of Poona during December 27-30, 1988.
9. Participated in "Regional Workshop on Applicable Mathematics" held at A.M.U. Aligarh during March 6-16, 1989.
10. Participated in 55th Annual Conference of "Indian Mathematical Society" held at University of Delhi during December 27-30, 1989.

11. Participated in "Northern Region National Seminar of the National Committee on Mathematics Education and Research" Organised by "The Indian Mathematical Society" and "The Department of Science & Technology, Government of India" held at Delhi during November, 15-18, 1990.
12. Participated and presented a paper titled "A Note on Schauder Decomposition and Best Approximation" in 57th Annual Conference of "Indian Mathematical Society" held at A.M.U. Aligarh during December 27-30, 1991.
13. Participated in "International Conference on Advances in Computational Mathematics" held at Indira Gandhi Open University during January 5-9, 1993.
14. Participated in "Conference on Fourier Analysis, Approximation Theory and their Applications" held at A.M.U. Aligarh during September 6-9, 1993.
15. Participated and delivered an invited talk titled "Variational Inequalities and Sobolev Spaces" in 59th Annual Conference of Indian Mathematical Society held at B.B.A. Bihar University, Muzaffarpur during December 27-30, 1993.
16. Participated in "61st Annual Conference of Indian Mathematical Society" held at A.M.U. Aligarh during December 27-30, 1995.
17. Participated and delivered a talk titled "Regularisation of Variational Inequalities" in the Conference on Functional Analysis and its Applications held at Jamia Millia Islamia, New Delhi during August 19-22, 1996.
18. Participated in the conference "Australian International Education Foundation" held at Taj Palace Convention Centre, New Delhi during October 24-25, 1996.
19. Participated and delivered an invited talk titled "Variational Inequalities and Complementarity Problems" in National Seminar on Operator Theory and Related Areas held at University of Delhi during November 1-3, 1996.
20. Participated in "International Conference on Function Spaces and Applications to Partial Differential Equations" held at University of Delhi during December 15-19, 1997.
21. Participated and delivered a talk titled "Wavelet Bases" in the Workshop on Industrial Mathematics held at Jamia Millia Islamia, New Delhi during April 11-12, 1998.
22. Participated and delivered a talk titled "Teaching and Research of Mathematics as an Instrument of National Development" in the International Conference on Industrial and Applied Mathematics held at India International Centre, New Delhi during December 4-6, 2004.
23. Participated and delivered a talk titled "Wavelet Analysis" in the National Seminar on Recent Developments in Analysis and Topology held at University of Jammu during February 25-27, 2005.
24. Participated and delivered a talk titled "Wavelets and their Applications" in the National Conference on New Trends in Functional Analysis and Operator Theory held at Osmania University, Hyderabad during March 11-12, 2005.
25. Participated, delivered a talk in the symposium "Fourier Analysis to Wavelet Analysis" and chaired a session in International Congress and 8th Conference of ISIAM on Certain Emerging Areas in Applicable Mathematics and 17th Annual Conference of Jammu Mathematical Society held at University of Jammu during March 31- April 3, 2007.
26. Participated, delivered a talk titled "Wavelet Packets" and chaired a session in 13th Annual Conference and 1st International Conference of Gwalior Academy of Mathematical Sciences with Symposium on Mathematical Modeling in Engineering and Biosciences held at Anand Engineering College, Agra during January 10-13, 2008.
27. Participated, delivered a talk titled "Wavelets and their Applications" and chaired a session in National Seminar in Analysis and Operator Theory held at University of Jammu during February 29-March 2, 2008.
28. Participated in "International Conference on Modelling of Engineering and Technological Problems" held at BMAS Engineering College, Keetham, Agra during January 14-16, 2009.

29. Participated, delivered a talk titled "Wavelets and their Applications in Signal Processing" and chaired a session in 20th Annual Conference of Jammu Mathematical Society held at Jammu during February 26-28, 2010.
30. Participated in "Satellite Conference on International Congress of Mathematicians 2010 on Mathematics in Science and Technology" held at India Habitat, New Delhi during August 14-17, 2010.
31. Participated and chaired a session in the International workshop on "Wavelets, frames and applications" held at Kirori Mal College, New Delhi during December 15-21, 2011.
32. Participated and delivered an invited talk titled "Wavelet Analysis and its Applications" In National Conference on Applied Mathematics and Computational Physics Held at Hindu College Moradabad during February 25-26, 2012.
33. Participated, delivered an invited talk on Wavelets and chaired a session in the International conference on "Differential Geometry and Functional Analysis" held at Jamia Millia Islamia, New Delhi during September 8-10, 2012.
34. Participated and chaired a session in the International conference on "History and Development of Mathematical Sciences & Symposium on Nonlinear Analysis" held at M.D. University, Rohtak during November 21-24, 2012.
35. Participated and chaired a session in the 11th biennial conference of the Indian Society of Industrial and Applied Mathematics on "Emerging Mathematical Methods, Models and Algorithms for Science and Technology" held at Gautam Buddha University, Greater Noida (UP) during December 15-16, 2012.
36. Participated and delivered an invited talk on "Wavelets and their applications" in national conference on Algebra, Analysis and Applications held at Shri Mata Vaishno Devi University, Katra (J&K) during March 15-16, 2013.
37. Participated and delivered an invited talk on "Applications of Wavelets" and Chaired a session in One Day National Conference in Mathematics on Analysis and its Applications held at G.G.M. Science College, Jammu on March 27, 2014.
38. Participated in the 12th biennial conference of the Indian Society of Industrial and Applied Mathematics on "Emerging Mathematical Methods, Models and Algorithms for Science and Technology" held at Punjabi University, Patiala (Punjab) during January 30-February 01, 2015.
39. Participated and chaired a session in the 12th IEEE International conference INDICON-2015 at Jamia Millia Islamia, New Delhi, during December 17-20, 2015.
40. Participated and delivered an invited talk on "Applications of Wavelets in Signal Processing and Image Processing" and Chaired a session in International Conference on Analysis and its Applications held at AMU Aligarh, during December 19-21, 2015.
41. Participated in the International conference on the occasion of Silver Jubilee of Indian Society of Industrial and Applied Mathematics held at Sharda University, Greater Noida (UP) during January 29-31, 2016.
42. Participated, delivered an invited talk on "Applications of Wavelets in Image Processing" and Chaired a session in International Conference on Mathematics for Brain Studies held at Noida International University, Gautam Budh Nagar (UP), during February 1-3, 2016.
43. Participated and delivered an invited talk on "Applications of Wavelet Packets in Signal Processing" and Chaired technical session in National Workshop on Analysis, Differential Equations and Applications held at ML Sukhadia University (Udaipur) during February 25-27, 2016.
44. Participated and delivered an invited talk on "Applications of Mathematics in Science and Technology" in National Conference on Analysis, Wavelets and their Applications held at BGSB University, Rajouri (J &K) during April 23-24, 2016.
45. Participated and delivered an invited talk on "Wavelets and Applications" in National Conference on Algebra, Analysis, Coding and Cryptography held at University of Delhi during October 14-15, 2016.

46. Participated, delivered an invited talk on “Wavelets and Applications” and Chaired a session in International Conference on Differential Geometry, Algebra and Analysis held at Jamia Millia Islamia, New Delhi during November 15-17, 2016.

Annexure - III

Lectures Delivered:

1. Delivered four lectures in the refresher course held at AMU Aligarh during November 1994.
2. Delivered eight lectures in the refresher course held at University of Roorkee during August 1995.
3. Delivered three lectures in the refresher course held at R.D. University, Jabalpur during December 1995.
4. Delivered two seminar lectures at University of Roorkee, Roorkee during May 1998.
5. Delivered a series of lectures in Wavelet Analysis at Yarmouk University, Irbid, Jordan during the stay for one year as Visiting Professor in the academic session 1998-99.
6. Delivered one lecture in the refresher course held at Jamia Millia Islamia on November 25, 1999.
7. Delivered two lectures in the refresher course held at A.M.U. Aligarh on January 19, 2000.
8. Delivered six lectures in the refresher course held at Guru Nanak Dev University, Amritsar during April 16-18, 2001.
9. Delivered three lectures in the refresher course held at Jamia Millia Islamia, New Delhi during September 3-22, 2001.
10. Delivered four lectures in the refresher course held at Guru Nanak Dev University, Amritsar during August 5-6, 2002.
11. Delivered six lectures in the refresher course held at Osmania University, Hyderabad during November 25-27, 2002.
12. Delivered four lectures in the refresher course held at Jamia Millia Islamia, New Delhi during January 27-28, 2003.
13. Delivered four lectures in the refresher course held at University of Jammu during May, 2003.
14. Delivered four lectures in the refresher course held at A.M.U. Aligarh during September 10-11, 2003.
15. Delivered one lecture in the refresher course held at Jamia Millia Islamia, New Delhi during January, 2005.
16. Delivered two extension lectures on Wavelet Packets in the Department of Mathematics, Osmania University, Hyderabad during March 14-15, 2005.
17. Delivered five lectures in the refresher course held at University of Jammu during June 5-7, 2006.
18. Delivered two lectures in the refresher course held at Jamia Millia Islamia, New Delhi during July, 2007.
19. Delivered four lectures in the refresher course held at University of Jammu during December, 2007.
20. Delivered two lectures in the refresher course held at University of Delhi during January, 2010.
21. Delivered two lectures in the refresher course held at B.P.S. Women University, Khanpur on December 27, 2010.
22. Delivered one lecture on Wavelet Analysis and its Applications at Sagar Institute of Research, Technology and Science, Bhopal on July 3, 2011.
23. Delivered four lectures on Wavelet Transforms and its Applications at Sagar Institute of Research, Technology and Science, Bhopal during June 4-5, 2012.
24. Delivered two lectures in the training programme on Integral Transforms, Wavelets, Distribution Theory and Applications at BHU Varanasi during July 16-17, 2012.
25. Delivered two lectures in the refresher course held at B. P. S. Women University, Khanpur on December 30, 2013.

26. Delivered four lectures on “Wavelets and their Applications” in the Refresher course held at B. P. S. Women University, Khanpur during December 2014.
27. Delivered one lecture on “Applications of Mathematics in Science and Technology” in the refresher course at Jamia Millia Islamia on September 12, 2018.
28. Delivered four lectures on “Topology and Functional Analysis” in the refresher course at pt. Ravishankar Shukla University, Raipur (Chhattisgarh) during December 8-11, 2020.

Annexure - IV

Contribution to the corporate life of the Institution:

1. Member, Board of Studies, Department of Mathematics, Jamia Millia Islamia, New Delhi, w.e.f. August 1975 to July 2014.
2. Member, Board of Studies, Department of Commerce, Jamia Millia Islamia, New Delhi for a period of 3 years w.e.f. August 1989.
3. Member, Board of Studies, Department of Applied Mathematics, Z.H. Engg. College, A.M.U. Aligarh for a period of 2 years w.e.f. September 1991.
4. Member, Board of Studies, Department of Mathematics, Kashmir University, Srinagar for a period of 3 years w.e.f. July 1993.
5. Member, Faculty Committee, Faculty of Natural Sciences, Jamia Millia Islamia, New Delhi, w.e.f. May 1994 to July 2014.
6. Head, Department of Mathematics, Jamia Millia Islamia, New Delhi for a period of 3 years w.e.f. April 3, 1995.
7. Member, Academic Council, Jamia Millia Islamia, New Delhi for a period of 3 years w.e.f. April 1995.
8. Member, Board of Studies, Department of Economics, Jamia Millia Islamia, New Delhi for a period of 3 years w.e.f. May 1995.
9. Member, Board of Studies, Department of Bio-Sciences, Jamia Millia Islamia, New Delhi for a period of 3 years w.e.f. May 1996.
10. Member, Board of Studies, Department of Applied Mathematics, Z.H. College of Engg. & Tech., AMU Aligarh for a period of 2 years w.e.f. January 1996.
11. Member Board of Studies, Department of Applied Mathematics, Z.H. College of Engg. & Tech., AMU Aligarh for a period of 2 years w.e.f. December 14, 1997.
12. Member, Faculty Committee, Faculty of Mathematical Sciences, University of Delhi for a period of 3 years w.e.f. January 14, 1998.
13. Member, Board of Studies, Department of Mathematics, Jiwaji University, Gwalior for a period of 3 years w.e.f. August 1, 1998.
14. Member, Board of Studies, Department of Mathematics, Guru Nanak Dev University, Amritsar for a period of 2 years w.e.f. August 2000.
15. Member, Faculty Committee, Faculty of Engineering and Technology, Z. H. College of Engg. & Tech., A.M.U. Aligarh for a period of 2 years w.e.f. September 2, 2000.
16. Member, Research Degree Committee, Department of Mathematics, Guru Nanak Dev University, Amritsar for a period of 2 years w.e.f. July 2002.
17. Member, Board of Studies, Department of Mathematics, University of Kashmir, Srinagar for a period of 3 years w.e.f. July 2003.
18. Member, Board of Studies, Department of Mathematics, A.M.U. Aligarh for a period of 2 years w.e.f. August, 2003.
19. Member, Faculty Committee, Faculty of Science, A.M.U. Aligarh for a period of 2 years w.e.f. August, 2005.
20. Member, Departmental Research Committee, Department of Mathematics, M. D. University, Rohtak for a period of 2 years w.e.f. April, 2010.

21. Dean, Faculty of Natural Sciences, Jamia Millia Islamia, New Delhi for a period of 3 years w.e.f. August 13, 2010.
22. Member, Finance Committee, Jamia Millia Islamia, New Delhi for a period of 3 years w.e.f. August 2010.
23. Member, Academic Council, Jamia Millia Islamia, New Delhi for a period of 3 years w.e.f. August 2010.
24. Chairman, Faculty Committee, Faculty of Natural Sciences, Jamia Millia Islamia, New Delhi for a period of 3 years w.e.f. August 2010.
25. Member, Court, Jamia Millia Islamia, New Delhi for a period of 3 years w.e.f. August 2010.
26. Member, Executive Council, Jamia Millia Islamia, New Delhi w.e.f. May 2013 to August 2013.
27. Member, Committee of Courses, CIRBAS, Jamia Millia Islamia, New Delhi for a period of 3 years w.e.f. August 2013.
28. Member, Board of Studies, Department of Mathematics, Rohilkhand University, Bareilly for a period of two years w.e.f. July 2014.
29. Member, Board of Studies, Department of Mathematics, Al-Falah University, w.e.f. August 2014.
30. Dean, School of Physical and Molecular Sciences, Al-Falah University for a period of two years w.e.f. February 2015.
31. Member, Board of Management, Al-Falah University, Faridabad for a period of two w.e.f. April 2015.
32. Member, Board of Research Studies, Al-Falah University, Faridabad w.e.f. April 2015.
33. Member, Board of Management, Al-Falah University, Faridabad for a period of two years w.e.f. July, 2018.
34. Dean Research, Al-Falah University, Faridabad.

Annexure - V

Conferences/Seminars/Workshops Organized:

1. Organized a ten days training programme for teachers of Mathematics teaching in schools managed by educationally backward communities in the capacity of Course Director during March 25-April 3, 1988.
2. Organized Fourth Annual Conference of Indian Society of Industrial and Applied Mathematics in the capacity of Local Secretary during April 6-8, 1996.
3. Organized a four days Conference on Functional Analysis and its Applications in the capacity as one of the Directors during August 19-22, 1996.
4. Organised a two days Workshop on Industrial Mathematics in the capacity of Organising Secretary during April 11-12, 1998.
5. Organised Refresher Course in Mathematics for three weeks for University and College teachers in the capacity of Course Coordinator during November 16 - December 7, 1999.
6. Organised Refresher Course in Mathematics for three weeks for University and College teachers in the capacity of Course Coordinator during January 7-28, 2004.
7. Organised Refresher Course in Mathematics for University and College teachers in the Capacity of Course Coordinator during November 7-28, 2006.
8. Organised two days International Conference on Recent Trends in Mathematics and its Applications in the capacity of Convener during March 30-31, 2009.