

## Academic Resume of Dr. Abdul Rahim Khan

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**Nationality** Pakistani  
**Date of Birth** January 1, 1953  
**Present Address** Department of Mathematical Sciences, King Fahd University of Petroleum and Minerals, (KFUPM), Dhahran 31261, Saudi Arabia.

### Academic Record

**Ph.D.** University of Wales, UK, 1983  
**M.Sc.** University of the Punjab, Lahore, Pakistan, 1974  
**B.Sc.(Hons.)** University of the Punjab, Lahore, Pakistan, 1973  
**Major Field** Nonlinear Functional Analysis  
**Areas of Research Interest** Fixed Point Theory and its Applications, Approximation Theory, Measure Theory and Integration.

### Professional Experience

**Associate Prof.** Department of Mathematical Sciences, KFUPM, Dhahran , Saudi Arabia. September 1997 to date.  
**Professor** Center for Advanced Studies In Pure and Applied Mathematics (CASPAM), Bahauddin Zakariya (B.Z.) University, Multan, Pakistan. January 1996 - August 1997.  
**Associate Prof.** CASPAM, B.Z. University, Multan, Pakistan. May 1988 - December 1995.  
**Assistant Prof.** CASPAM, B.Z. University, Multan, Pakistan. August 1984 - May 1988.  
**Lecturer** Department of Mathematics, University of Multan, Pakistan. October 1976 - August 1984.

## Administrative Experience

<b>Director</b>	CASPAM, B.Z. University, Multan, Pakistan. September 1995 - December 1996.
<b>President</b>	Bahauddin Zakariya University Teachers Association. 1991 - 1997.
<b>Students Advisor</b>	CASPAM, B.Z. University, Multan, 1983-1992.
<b>Treasurer</b>	Pakistan Teachers Forum. 1991-1997.
<b>Secretary</b>	Pakistan Association for the Advancement of Science, Multan Local Chapter 1987-1992
<b>Chief Organizer</b>	Zakarian Mathematical Society.
<b>Coordinator</b>	Math Education Seminar, KFUPM, 2002- to date,
<b>Coordinator</b>	Text book, Department of Mathematics & Statistics, KFUPM, 2006---to date

## Member of Professional Societies

<b>Member</b>	American Mathematical Society (1990-91, 1994-95 and 2000-2007).
<b>Member</b>	Japanese Association of Mathematical Sciences (2000-2001).
<b>Life Member</b>	Punjab Mathematical Society.
<b>Life Member</b>	Zakariyan Mathematical Society.
<b>Member</b>	All Pakistan Mathematical Society.
<b>Member</b>	Pakistan Association for the Advancement of Science

## Award of scholarships :

Merit Scholarship in B.Sc. Hons. (1970-73)

Merit Scholarship in M.Sc. (1974)

Central Overseas Training Scholarship, Govt. of Pakistan (1979-1983).

Post Doctoral Fellowship, British Council (August 1994 – January 1995)

## Research Activities

### ***Research Projects at KFUPM***

1. Deterministic and random versions of Ky Fan's approximation theorem with applications, Research Project: FT/2002-01, completed (2004).
2. Coincidences and approximation of non-commuting multivalued maps with applications, Sabic Research Project No. SB070016, in progress.
3. Iterative methods for solving variational inequalities with applications, Project No. MS/Applications /362, in progress.

### **Theses supervised**

#### ***Ph.D. Thesis supervised at KFUPM***

1. A. ADomlo (ID #200652) Fixed points of some nonlinear maps with applications, 2006

## Theses supervised at B.Z. University, Multan, Pakistan

### (a) **Ph.D. Theses Supervised**

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|-------------------|--|
| (1) Nawab Hussain | Some types of best approximation and their applications, 2002.       |
| (2) Arjamand Bano | Fixed points for multivalued maps, 2004.                             |
| (3) M.Arif Rafiq  | Fixed point theorems in generalized metric and Banach spaces, 2004 . |

### (b) **M. Phil. Thesis Supervised**

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|-----|------------------------|---|
| 1.  | Attiya Qaseem Siddiqui | The strict convexity and fixed point theorems, 1987.                              |
| 2.  | M.K. Mehmood           | The fixed points of non-expansive mappings, 1988 (Review).                        |
| 3.  | Naseem Gul             | The Hewitt-Yosida decomposition, 1988 (Review).                                   |
| 4.  | Safeer Hussain         | Group-valued order continuous submeasures, 1990.                                  |
| 5.  | Mujahid Abbas          | Multifunctions and the existence of best approximation, 1992.                     |
| 6.  | M. Shahid Ashraf       | Strongly unique best approximation in metrizable topological vector spaces, 1993. |
| 7.  | M. Aslam               | Best approximation and fixed point theorems in locally convex spaces, 1995.       |
| 8.  | Hamid Ayaz             | Some aspects of strong uniqueness, 1995.  |
| 9.  | Gulam Mustafa          | Fixed point theorems for multivalued mappings, 1996.                              |
| 10. | M. Akram               | Some studies in open mapping and closed graph theorems, 1996.                     |

### Ph.D. Thesis supervision in Progress

Mrs. Farhana Akbar , University of Sargodha ,Pakistan.

Title : Fixed point and best approximation results in certain topological vector spaces

### Theses reviewed and examined

#### **Ph. D. Thesis**

Mujahid Abbas , Solution of random operator equations and inclusions, 2005  
( written under the supervision of Professor I.Beg , LUMS, Lahore ,Pakistan)

### List of M. Phil. Theses reviewed and examined at Quaid-e-Azam University, Islamabad, Pakistan.

1. Fixed point theorems, 1986.
2. Integral representation of linear operators, 1987.
3. Decompositional properties of Banach spaces, 1988.
4. Best approximation in function spaces, 1990.
5. P. Commutative topological algebras, 1991.
6. Compact and precompact operators on topological vector spaces, 1991.
7. Gelfand representation theory of topological algebras, 1991.
8. Fixed point theorems in probabilistic spaces, 1991.
9. Decomposition of C\*-algebras relative to a functional equation, 1991.
10. Weak resolvents of operators, 1992.

M.S. Theses Examined at King Abdul Aziz University, Jeddah,  
Saudi Arabia

1. On coincidence points for hybrid contraction maps, 2001.
2. Derivations on Banach and topological algebras , 2003.
3. Multipliers and Aren product on topological algebras , 2003.
4. Fixed points for nonexpansive maps in locally convex spaces ,2005
5. Continuity of algebra homomorphisms on topological algebras ,2006 .

Refereed Papers for :

1. Applicable Analysis
2. Applied Mathematics Letters
3. Taiwanese Journal of Mathematics
4. Journal of Applied Mathematics and Stochastic Analysis
5. International Journal of Mathematics and Mathematical sciences,
6. Journal Natural Science & Mathematics
7. Arabian Journal for Science and Engineering
8. Carpathian Journal of Mathematics
9. Indian Journal of Mathematics
10. The Science Journal of King Abdulaziz University

Papers Reviewed for the Mathematical Reviews

1. MR2172319 (2006i:41029) O'Regan, Donal; Shahzad, Naseer Invariant approximations for generalized  $I$ -contractions. Numer. Funct. Anal. Optim. 26 (2005), no. 4-5, 565--575.
2. MR2147613 (2006f:49015) Kimura, Yasunori On Mosco convergence for a sequence of closed convex subsets of Banach spaces. Banach and function spaces, 291--300, Yokohama Publ., Yokohama, 2004.
3. MR2128782 (2006b:41051) Narayana, Darapaneni; Rao, T. S. S. R. K. Proximality in generalized direct sums. Int. J. Math. Math. Sci. 2004, no. 65-68, 3663-----
4. MR1997786 (2004i:49024) Zhang, H.-L. On maximal element problem and quasi-variational inequality problem in l.c. metric spaces. J. Appl. Anal. 9 (2003), no. 1, 131--138.
5. MR1929430 (2003j:47071) Frigon, M.; O'Regan, D. A Leray-Schauder alternative for Mönch maps on closed subsets of Fréchet spaces. Z. Anal. Anwendungen 21 (2002), no. 3, 753--760.
6. MR2043195 (2005c:49048) Zhu, Jiang Locally variational principle and surjective mapping theorems of set-valued mappings. Fixed point theory and applications. Vol. 2 (Chinju/Masan, 2000), 185--200, Nova Sci. Publ., Huntington, NY, 2001.
7. MR1892912 (2003d:49010) Naselli, Ornella A class of functionals on a Banach space for which strong and weak local minima do coincide. Optimization 50 (2001), no. 5-6, 407--411.

8. MR1867790 (2003a:41035) Li, Chong; Ni, Renxing; Watson, G. A. On nonlinear coapproximation in Banach spaces. *Approx. Theory Appl. (N.S.)* 17 (2001), no. 2, 54--63.
9. MR1814140 (2002b:47108) Agarwal, Ravi P.; O'Regan, Donal Essentiality for Mönch type maps. *Proc. Amer. Math. Soc.* 129 (2001), no. 4, 1015--1020 (electronic)
10. MR1812588 (2002c:47126) Kim, In-Sook Fixed point theorems of quasicompact multivalued mappings in general topological vector spaces. *Bull. Korean Math. Soc.* 38 (2001), no. 1, 113—120 .
11. MR1810576 (2002b:41021) Dinh Dung On asymptotic orders of n-term approximations and non-linear n-width *Vietnam J. Math.* 27 (1999), no. 4, 363-367.

### Differential Equation Research Lab (DERL), KFUPM

Member 2005---- to date

#### **PARTICIPATION IN SHORT COURSES**

- 1) Nonstandard Analysis, University College of Wales ,Aberystwyth ,UK ( 1980)
- 2) British Mathematical Colloquium (1981 and 1982.)
- 3) Recent Developments in Mathematics and Computer Science and their Applications, ICTP, Trieste, Italy (May-June, 1990).
- 4) Topics in Nonlinear Analysis with Applications to Differential Equations , KFUPM (2003 ) .
- 5) Sobolev spaces, KFUPM ( 2004 ) .

**Note:** These programmes were offered by prominent faculty members from various British and American Universities and KFUPM.

## Publications

- JP1 A. R. Khan and K.Rowlands, "A decomposition theorem for submeasures," Glasgow Mathematical Journal, vol. 26, no. 1, pp. 69-74, 1985.
- JP2 A. R. Khan, "On group-valued submeasures," Punjab University Journal of Mathematics, vol. XVII, pp. 11-22, 1984-85.
- JP3 A. R. Khan, "A note on semigroup-valued measures," Mathematica Japonica, vol. 30, no. 3, pp. 399-403, 1985.
- JP4 A. R. Khan and K. Rowlands, "On a theorem of Danes and the principle of equicontinuity," Bollettino della Unione Matematica Italiana, vol. 6, pp. 211-215, 1986.
- JP5 A. R. Khan, "On a theorem of Helson and the principle of equicontinuity," Journal of Natural Sciences and Mathematics, vol. 27, no. 1, pp. 15-19, 1987.
- JP6 A. R. Khan, "Another proof of the Vitali-Hahn-Saks theorem," Journal of Research, Bahauddin Zakariya University, vol. 2, no. 2, pp. 23-26, 1989.
- JP7 A. R. Khan and A.Q.Siddiqui, "Fixed points in metrizable topological vector spaces," Mathematica Japonica, vol. 36(6), pp. 1129-1134, 1991.
- JP8 A. R. Khan and A.Q.Siddiqui, "The exhaustion principle for 0-measures," Sindh University Research Journal, vol. 23(1), pp. 43-47, 1991.
- JP9 A. R. Khan and S. H. Khan, "Order continuous group-valued submeasures," Journal of Research, Bahauddin Zakariya University, vol. 4, no. 1, pp. 35-38, 1992.
- JP10 A. R. Khan, M.Abbas, and Z.Akram, "Best approximation as a fixed point in locally bounded topological vector spaces," Punjab University Journal of Mathematics, vol. XXV, pp. 123-130, 1992
- JP11 A. R. Khan and S.H.Khan, "Principle of equicontinuity for topological groups," Matemat. Bech., vol. 44, pp. 7-10, 1992.
- JP12 A. R. Khan, Z.Akram, and M.Abbas, "Fixed point theorems for set-valued mappings in a semi-convex setting," Southeast Asian Bulletin Mathematics, Special Issue, pp. 43-47, 1993.
- JP13 A. R. Khan, M.A. Shahid, and N.Hussain, "Strong uniqueness in metrizable topological vector spaces," Bulletin of the Malaysian Mathematical Society, vol. 17, pp. 21-27, 1994.
- JP14 A. R. Khan, M.Abbas, and Z.Akram, "Existence of best approximation by multifunctions," Journal of Research, Bahauddin Zakariya University, vol. 6,

no. 1, pp. 17-21, 1994.

- JP15 L. A. Khan and A. R. Khan, "An extension of Brosowski-Meinardus theorem on invariant approximation," *Approximation Theory and its Applications*, vol. 11, no. 4, pp. 1-5, 1995.
- JP16 A. R. Khan, M.Asalam, and N.Hussain, "Some best approximation results in locally convex spaces," *Approximation Theory and its Applications*, vol. 12, no. 3, pp. 29-36, 1996.
- JP17 A. R. Khan, N.Hussain, and M.Asalam, "Mann iterative construction of fixed points in locally convex spaces," *Journal of Natural Sciences and Mathematics*, vol. 36, no. 2, pp. 155-159, 1996.
- JP18 A. R. Khan, N.Hussain, and M.Akram, "On open mapping and closed graph theorems," *Punjab University Journal of Mathematics*, vol. XXXI, pp. 95-102, 1998.
- JP19 A. R. Khan, N.Hussain, and L.A.Khan, "A note on Kakutani type fixed point theorems," *International Journal of Mathematics and Mathematical Sciences*, vol. 24, no. 4, pp. 231-235, 2000.
- JP20 A. R. Khan and N.Hussain, "Best approximation and fixed point results," *Indian Journal of Pure and Applied Mathematics*, vol. 31(8), pp. 983-987, 2000.
- JP21 A. R. Khan, N. Hussain, and A. B.Thahmeem, "Applications of fixed point theorems to invariant approximation," *Approximation Theory and its Applications*, vol. 16, no. 3, pp. 48-55, 2000.
- JP22 A. R. Khan and N.Hussain, "Fixed point and best approximation theorems for \*-nonexpansive maps," *Punjab University Journal of Mathematics*, vol. XXXIII, pp. 135-144, 2000.
- JP23 A. R. Khan and N.Hussain, "Random fixed points for \*-nonexpansive random operators," *Journal of Applied Mathematics and Stochastic Analysis*, vol. 14, no. 4, pp. 341-349, 2001.
- JP24 A. R. Khan and N.Hussain, "Iterative approximation of fixed points of nonexpansive maps," *Scientiae Mathematicae Japonicae*, vol. 54, no. 3, pp. 503-511, 2001.
- JP25 A. B.Thahmeem and A. R. Khan, "On some properties of Banach operators," *International Journal of Mathematics and Mathematical Sciences*, vol. 27, no. 3, pp. 149-153, 2001.
- JP26 A. R. Khan and S. H.Khan, "Group-valued submeasures and the range of measures," *Analele Stiintificae Ale Universitatii Matematica*, vol. XLVII, pp. 35-42, 2001.
- JP27 A. R. Khan and N.Hussain, "An extension of a theorem of Sahab, Khan and Sessa," *International Journal of Mathematics and Mathematical Sciences*, vol.

- 27, no. 11, pp. 701-706, 2001.
- JP28 A. Latif, A.Bano, and A. R. Khan, "Some results on multivalued  $s$ -nonexpansive maps," *Radovi Matematički*, vol. 10, no. 1, pp. 195-201, 2001.
- JP29 A. R. Khan and N.Hussain, "Random fixed point theorems for  $*$ -nonexpansive operators in Frechet spaces," *Journal of the Korean Mathematical Society*, vol. 39, no. 1, pp. 51-60, 2002.
- JP30 A. R. Khan, A. B.Thahmeem, and N.Hussain, "Random fixed points and random approximations in nonconvex domains," *Journal of Applied Mathematics and Stochastic Analysis*, vol. 15, no. 3, pp. 263-270, 2002.
- JP31 A. R. Khan, A. Bano and A. Latif, "Coincidence points and best approximation," *Journal of Pure and Applied Sciences*, vol 21. no. 2, pp. 103-108, 2002
- JP32 A. R. Khan, A.Bano, and N.Hussain, "Common fixed points in best approximation theory," *International Journal of Pure and Applied Mathematics*, vol. 2, no. 4, pp. 411-426, 2002.
- JP33 A. R. Khan and N.Hussain, "Random approximations and random fixed points for  $*$ -nonexpansive maps," *Mathematical Sciences Research Journal*, vol. 6, no. 4, pp. 174-182, 2002.
- JP34 A. R. Khan, A.Latif, A.Bano, and N.Hussain, "Coincidence point results in locally convex spaces," *International Journal of Pure and Applied Mathematics*, vol. 3, no. 4, pp. 413-423, 2002.
- JP35 N. Hussain and A. R. Khan, "Common fixed-point results in best approximation theory," *Applied Mathematics Letters*, vol. 16, no. 4, pp. 575-580, 2003.
- JP36 A. R. Khan, A. B.Thahmeem, and N.Hussain, "Random fixed points and random approximations," *Southeast Asian Bulletin of Mathematics*, vol. 27, no. 2, pp. 1-6, 2003.
- JP37 A. R. Khan and N. Hussain, "Characterizations of random approximations," *Archivum Mathematicum (Brno)*, vol. 39, no. 4, pp. 271-275, 2003.
- JP38 A. R. Khan, A.B.Thahmeem, and N.Hussain, "A stochastic version of Fans best approximation theorem," *Journal of Applied Mathematics and Stochastic Analysis*, vol. 16, no. 3, pp. 275-282, 2003.
- JP39 A. Bano, A. R. Khan, and A. Latif, "Coincidence points and best approximations in  $P$ -normed spaces," *Radovi Matematički*, vol. 12, no. 1, pp. 27-36, 2003.
- JP40 I. Beg, N. Hussain, and A. R. Khan, "Fixed point, almost fixed point and

- best approximation of nonexpansive multivalued mapping in Banach spaces," *Advances in Mathematical Sciences and Applications*, vol. 13, no. 1, pp. 83-111, 2003.
- JP41 N. Hussain and A. R. Khan, "Random fixed points of multivalued \*-nonexpansive maps," *Random Operators and Stochastic Equations*, vol. 11, no. 3, pp. 243-254, 2003.
- JP42 N. Hussain and A. R. Khan, "Applications of the best approximation operator to \*-nonexpansive maps in Hilbert spaces," *Numerical Functional Analysis and Optimization*, vol. 24, no. 3 & 4, pp. 327-338, 2003.
- JP43 N. Hussain and A. R. Khan, "Common fixed points and best approximation in p-normed spaces," *Demonstratio Mathematica*, vol. XXXVI, no. 3, pp. 675-681, 2003.
- JP44 A. R. Khan and N. Hussain, "Random coincidence point theorem in Frechet spaces with applications," *Stochastic Analysis and Applications*, vol. 22, no. 1, pp. 155-167, 2004.
- JP45 A. R. Khan, N. Hussain, and A. B. Thaheem, "Some generalizations of Ky Fan,s best approximation theorem," *Analysis in Theory and Applications*, vol. 20, no. 2, pp. 189-198, 2004.
- JP46 A. B. Thaheem and A. R. Khan, "On some properties of Banach operators ,II," *International Journal of Mathematics and Mathematical Sciences*, vol. 47, pp. 2513-2515, 2004.
- JP47 I. Beg, A. R. Khan, and N.Hussain, "Approximation of \*-nonexpansive random multivalued operators on Banach spaces," *Journal of the Australian Mathematical Society*, vol. 76, pp. 51-66, 2004.
- JP48 A. R. Khan, A. Latif, A. Bano, and N. Hussain, "Some results on common fixed points and best approximation," *Tamkang Journal of Mathematics*, vol. 36, no. 1, pp. 33-38, 2005.
- JP49 A. Latif, A.Bano, and A. R. Khan, "A result on best approximation in locally convex spaces," *Tamkang Journal of Mathematics*, vol. 36, no. 3, pp. 237-242, 2005.
- JP50 A. R. Khan, "Properties of fixed point set of a multivalued map," *Journal of Applied Mathematics and Stochastic Analysis*, vol. 2005, no. 3, pp. 323-332, 2005.
- JP51 H. Fukhar-ud-din and A. R. Khan, "Convergence of implicit iterates with errors for mappings with unbounded domain in Banach spaces," *International Journal of Mathematics and Mathematical Sciences*, vol. 10, pp. 1643-1653, 2005.
- JP52 A. R. Khan and A.A.Domlo, "Common fixed points of compatible maps on

- balls and eigenvalue problems," *Nonlinear Analysis Forum*, vol. 11, no. 1, pp. 15-21, 2006.
- JP53 A. R. Khan and A.A.Domlo, "Random fixed points of multivalued inward random operators," *Journal of Applied Mathematics and Stochastic Analysis*, vol. 2006, no. Article. ID 19428, pp. 1-8, 2006.
- JP54 A. R. Khan, F. Akbar, N. Sultana and N. Hussain, "Coincidence and invariant approximation theorems for generalized  $f$ -nonexpansive multivalued mappings", *International Journal of Mathematics and Mathematical Sciences*, Vol. 2006, Article ID 17637, Pages 1-18
- JP55 A. R. Khan and K.Rowlands, "On locally solid topological lattice groups", *Czechoslovak Mathematical Journal*, vol. 57(123), pp . 963-973 ,2007 .
- JP56 H. Fukhar-ud-din and A. R. Khan, "Approximating common fixed points of asymptotically nonexpansive maps in uniformly convex Banach spaces," *Computers & Mathematics with Applications*, vol. 53,no. 9, pp. 1349-1360, 2007.
- JP57 A. R. Khan, A.A.Domlo, and N.Hussain, "Coincidences of Lipschitz type hybrid maps and invariant approximation," *Numerical Functional Analysis and Optimization*, vol.28 , no.9-10,pp. 1165-1177,2007 .
- JP58 H. Fukhar-ud-din, A. R. Khan, D.O,Regan, and R.P.Agarwal, "An implicit iteration scheme with errors for a finite family of uniformly continuous mappings," *Functional Differential Equations*, vol. 14, no. 2-4, pp. 245-256, 2007.
- JP59 A. R. Khan and A.A.Domlo, "Coincidence and fixed point of nonself contractive maps with applications," *Indian Journal of Mathematics*, vol. 49, no. 1, pp. 17-30, 2007.
- JP60 A. R. Khan , "On principle of equicontinuity " , *Electronic Modelling ( National Academy of Sciences , Ukraine )* ,vol.29,no.5,pp. 23-32,2007 .
- JP61 A. R. Khan, A.A.Domlo, and H.Fukhar-ud-din, "Common fixed points Noor iteration for a finite family of asymptotically quasi-nonexpansive mappings in Banach spaces," *Journal of Mathematical Analysis and Applications*, Doi :10.1016/j.jmaa.2007.06.051 ; Available online July 16,2007
- JP62 A. R. Khan and F. Akbar, Common fixed points from simultaneous best approximations, *Taiwanese Journal of Mathematics ( Accepted)*.
- JP63 Hafiz Fukhar-ud-din and Abdul Rahim Khan ,Weak and strong convergence of Noor iterations for two asymptotically quasi-nonexpansive mappings , *Nonlinear Functional Analysis and Applications* ,In press

## Citations Received from Others

### Paper No. JP1 cited by:

- 1 Valentina Blendea and Gheorghe Blendea. On decomposition of group-valued submeasures. *Analele Stiintifice ale Universitatii matematica*, 35:1-4, 1989.
- 2 Anna Avallone, Antonietta Valente. A decomposition theorem for submeasures. *Atti Sem. Fis. Univ. Modena*, XLIII:81-90, 1995.

### Paper No. JP11 cited by:

- 1 S. U. Raczkowski and F. Javier Trigos-Arrieta. Duality of totally bounded Abelian groups. *Bol.Soc.Mat.Mexicana*, 3(7):1-14, 2001

### Paper No. JP15 cited by:

- 1 H. K. Pathak, N. Hussain. Common fixed points for Banach operator pairs with applications *Nonlinear Analysis*(2007),doi:10.1016/j.na.2007.08.051.
- 2 N. Hussain. Common fixed point in best approximation for Banach operator pair with Ciric type I-contractions , *Journal of Mathematical Analysis and Applications*, 338,1351-1363, 2007 .
- 3 N. Hussain and B. E. Rhoades. C-Commuting maps and invariant approximations. *Fixed point theory and applications*, 2006(24543):1-9, 2006
- 4 Hemant Kumar Nashine. Invariant Approximations for Noncommuting Generalized (I, T)-Nonexpensive Mappings in q-Normed Spaces. *Filomat*, 20(2):55-65, 2006.
- 5 Abdul Latif, Common fixed points versus best approximations. *Tamkang Journal of Math*, 32(3):181-186, 2001
- 6 Liaqat Ali Khan, Abdul Latif. Some results on common fixed points and best approximation in P-normed spaces. *Demonstratio Mathematica*, XXXIV(4):831-836, 2001.

### Paper No. JP19 cited by:

- 1 S. Al-Mezal and N.Hussain. On common fixed point and approximation results of Gregus type. *International Mathematical Forum*, 2(37):1839-1847, 2007.

### Paper No. JP21 cited by:

- 1 N. Hussain. Common fixed point in best approximation for Banach operator pair with Ciric type I-contractions, *Journal of Mathematical Analysis and Applications*,338,1351-1363, 2007.

### Paper No. JP23 cited by:

- 1 N. Shahzad. Random fixed points of discontinuous random maps. *Mathematical and*

Computer Modelling, 41:1431-1436, 2005

- 2 Mujahid Abbas. Solutions of random operator equations and inclusions, Ph.D. Thesis Written under the supervision of Professor Ismat Beg, Director, Centre for Advanced Studies in Mathematics, Lahore University of Management Sciences, Lahore, Pakistan, 2005.

**Paper No. JP24 cited by:**

- 1 N. Hussain. Common fixed point in best approximation for Banach operator pair with Ciric type I-contractions cotractions Journal of Mathematical Analysis and Applications 338, 1351-1363, 2007 .
- 2 Vasile Berinde. Iterative Approximation of Fixed Points, Second Edition, Monograph, Springer, Berlin., Dec. 2005.

**Paper No. JP27 cited by:**

- 1 S. Al- Mezel and N. Hussain. On common fixed point and approximation results of Gregus type. International Mathematical Forum, 2(37):1839-1847, 2007
- 2 M.S.Khan and H.K. Nashine, on invariant approximation for noncommuting mappings in locally convex spaces, Journal of Computational Analysis and Applications, vol.10, No. 1, pp 7-15, 2008 .

**Paper No. JP35 cited by:**

- 1 H. K. Pathak, N. Hussain. Common fixed points for Banach operator pairs with applications Nonlinear Analysis(2007), doi:10.1016/j.na.2007.08.051 .
- 2 N. Hussain, G. Jungck. Common fixed point and invariant approximation results for noncommuting generalized (f,g)-nonexpansive maps. Journal of Mathematical Analysis and Applications, 321:851-861, 2006.
- 3 Nawab Hussain and Vasile Berinde. Common fixed point and invariant approximation results in certain metrizable topological vector spaces. Fixed point theory and applications, 2006(23582):1-13, 2006.
- 4 Ismat Beg and Mujahid Abbas. Coincidence point and invariant approximation for mappings satisfying generalized weak contractive condition. Fixed point theory and applications, 2006(74503):1-7, 2006.
- 5 N. Hussain and B. E. Rhoades. C-commuting maps and invariant approximations. Fixed point theory and applications, 2006(24543):1-9, 2006.
- 6 N. Hussain. Common fixed points in best approximation for Banach operator pair with Ciric type I-contractions Journal of Mathematical Analysis and Applications 338, 1351-1363, 2007.
- 7 J. Chen and Z. Li. Common fixed- points for Banach operator pairs in best approximation. Journal of Mathematical Analysis and Applications, 336:1466-1475, 2007.
- 8 S. Al-Mezel and N. Hussain. On common fixed point and approximation results of Gregus type. International Mathematical Forum, 2(37):1839-1847, 2007.

- 9 Y. Song, Common fixed points and invariant approximations for generalized  $(f,g)$  – nonexpansive mappings, *Communications in Mathematical Analysis*, vol. 2, No.2, pp 17-26, 2007
- 10 J.Z.Xiao and X.H.Zhu ,Common fixed point theorems on weakly contractive and nonexpansive mappings, *Fixed Point Theory and Applications*, Accepted for publication
- 11 M.S.Khan and H.K. Nashine , on invariant approximation for noncommuting mappings in locally convex spaces , *Journal of Computational Analysis and Applications*, vol.10,No. 1, pp 7-15 ,2008 .

**Paper No. JP36 cited by:**

- 1 Hemant Kumar Nashine. Existence of Common Random Fixed Point to Random Best Approximation. *Southeast Asian Bulletin of Mathematics*, 30(5):923-930, 2006.

**Paper No. JP40 cited by:**

- 1 Ismat Beg ,Mujahid Abbas. Fixed point theorems for weakly inward multivalued maps on a convex metric space. *Demonstratio Mathematica*, XXXIX(1):149-160, 2006.

**Paper No. JP42 cited by:**

- 1 H. Fukhar-ud-din. Explicit and implicit iterative methods for approximation of fixed points of nonlinear mappings, Ph.D. Thesis , Department of Mathematical and Computing Sciences, Tokyo Institute of Technology, Tokyo, Japan. , 2007.

**Paper No. JP44 cited by:**

- 1 Mujahid Abbas.. Solutions of random operator equations and inclusions, Ph. D. Thesis Written under the supervision of Professor Ismat Beg, Director, Centre for Advanced Studies in Mathematics, Lahore University of Management Sciences, Lahore, Pakistan., 2005.

**Paper No. JP47 cited by:**

- 1 Mujahid Abbas.. Solutions of random operator equations and inclusions, Ph. D. Thesis Written under the supervision of Professor Ismat Beg, Director, Centre for Advanced Studies in Mathematics, Lahore University of Management Sciences, Lahore, Pakistan., 2005.
- 2 M. Abbas and I. Beg. Coupled random fixed points of random multi-valued operators on ordered Banach spaces . *Communications on Applied Nonlinear Analysis*, 13(4):31-42, 2006.
- 3 I. Beg and M. Abbas ,Random fixed point theorems for Caristi type random operators ,*Journal of Applied Mathematics and Computing*,25,425-434,2007.
- 4 I. Beg and M. Abbas ,Convergence of multivalued mappings via approximable measurable selectors ,*Computers and Mathematics with Applications*(2007),doi:10.1016/j.camwa.2007.10.021

**Paper No. JP48 cited by:**

- 1 N. Hussain. Common fixed point in best approximation for Banach operator pair with Ciric type I-contractions. Journal of Mathematical Analysis and Applications 338,1351-1363, 2007.

**Paper No. JP49 cited by:**

- 1 N. Hussain. Common fixed point in best approximation for Banach operator pair with Ciric type I-contractions, Journal of Mathematical Analysis and Applications 338, 1351-1363, 2007.

**Paper No. JP51 cited by:**

- 1 S. Plubtieng, P. Kumam and R. Wangkeeree , Approximation of a common random fixed point for a finite family of random operators ,International Journal of Mathematics and Mathematical Sciences Volume 2007,Article ID 69626,12 pages

### Conference Publications

1. A. R. Khan ,N. Hussain and M. Aslam ,Fixed point theorems for the sum of two maps in locally convex spaces, Proc. All Pakistan Mathematical Conference, 1997, 15-20.
2. A. R. Khan ,Common fixed points from best approximation, Proc. 26<sup>th</sup> Summer Symposium in Real Analysis (Washington and Lee University), Real Analysis Exchange, 2002, 189- 196.
3. A. R. Khan , Random coincidence points of multivalued contractive random Operators ,Proc. International Conference on Nonlinear Analysis and Convex Analysis, Okinawa , 2005,215-226
4. A. R. Khan, Best approximation operator and fixed points of multivalued mappings ,Modern Mathematical Models, Methods and Algorithms for Real World Problems, Anamaya Publishers ,New Delhi,2007.

### Papers Under Review for Publication in Refereed Journals

1. A. R. Khan, Random coincidence points of contractive multivalued mappings .
2. A. R. Khan, Fixed point iteration processes of nonexpansive mappings---A unified approach.
3. A. R. Khan and A. A. Domlo , Random Ishikawa iteration scheme of two random operators .
4. N. Hussain, F.Akbar and A. R. Khan ,Random coincidence points of subcompatible multivalued maps .
5. N. Hussain ,F. Akbar ,A. R.Khan and Q. H. Ansari , Common fixed points and approximation of subcompatible maps on locally convex spaces .
6. L. C. Ceng, A.R.Khan, Q.H.Ansari and J.C.Yao , Strong convergence of composite iterative schemes for zeros of m-accretive operators in Banach spaces .

## Other Publications

A. R. Khan, "On group-valued measures and submeasures and locally solid topological l-groups," Ph.D. Dissertation, Department of Pure Mathematics, University of Wales, Aberystwyth, Wales ,U.K., 1983.

Introduction to Lebesgue Integration , Ilmi Kitab Khana, Lahore, Pakistan, 1993 (M.Sc. Level Book).

## Seminars / Invited Lectures

1. A measure-theoretic proof of the uniform boundedness principle, Department of Pure Mathematics, University College of Wales, Aberystwyth, UK (1979).
2. On the generalization of exhaustion principle for submeasures, Conference Scientific Society of Pakistan, University of Karachi, Pakistan (1983).
3. On a theorem of Danes and the principle of equicontinuity for topological groups, All Pakistan Mathematical Conference, Quaid-e-Azam University, Islamabad, Pakistan (1985).
4. On locally solid topological l-groups, accepted for presentation at International Congress of Mathematicians, Berkeley, California, USA (1986).
5. Decomposition theorems for group-valued submeasures, under the auspices of Research and Planners Group, B.Z. University, Multan, Pakistan (1986).
6. Some recent developments in functional analysis, Department of Mathematics, Govt. F.C. College, Lahore, Pakistan (1989).
7. Mathematical logic and reasoning, Summer School in science for talented students of Intermediate classes from all Boards of Education from the Punjab province arranged by the Board of Intermediate and Secondary Education Multan at Khanaspur, Pakistan (1991).
8. Fixed point theorems for set-valued mappings in a Semi-Convex setting, Manila International Conference on Functional analysis and Global analysis (1992).
9. Some aspects of Ky Fan best approximation theorem, Department of Mathematical Sciences, KFUPM, Dhahran, Saudi Arabia (1998).
10. Random fixed point results for \*-nonexpansive operators and their applications, Department of Mathematical Sciences, KFUPM, Dhahran, Saudi Arabia (2000).
11. Common fixed points form best approximation, 26<sup>th</sup> Summer symposium in Real Analysis, Washington and Lee University ,Lexington,U.S.A. (2002).

12. Noncommuting maps, Coincidence points and invariant approximation, Lahore University of Management Sciences (LUMS), Lahore, Pakistan, 2002.
13. Coincidence point theory: Existence and Applications, Department of Mathematical Sciences, KFUPM, Dhahran, Saudi Arabia (2003).
14. Applications of best approximation operator, Poster presentation , Fifth International Congress on Industrial and Applied Mathematics, Sydney, Australia (2003) .
15. Random coincidence point of random multivalued operators, The fourth international conference on Nonlinear Analysis and Convex Analysis , Okinawa, Japan, 2005.
16. Coincidences and a general scheme for non-commuting maps ,1st Mathematics Conference ,Bahauddin Zakariya University, Multan , Pakistan 2007 .
17. An iterative scheme of a nonexpansive map and its applications , Summer conference in mathematics ,LUMS ,Lahore, PAKISTAN, 2007 .
18. Fixed point iteration process of nonexpansive mappings---A unified approach , Engineering Mathematics and Applications Conference ,University of Tasmania , Hobart , Australia ,2007.

## Conferences and workshops Attended

Ser	Event	Type	Period
1	Engineering Mathematics and Applications Conference: University of Tasmania, Hobart, Tasmania, Australia	Conference	1-4 Jul, 2007
2	1 <sup>st</sup> Mathematics Conference B. Z. University, Multan, Pakistan.	Conference	27-28 July. 2007
3	Research at KFUPM: Future Outlook	Workshop	20 Feb, 2007
4	Quality Measures in Research, Department of Mathematics and Statistics, KFUPM	Workshop	6 March, 2007
5	7th International Pure Mathematics Conference Pakistan Mathematical Society, Islamabad, Pakistan.	Conference	5-7 Aug, 2006
6	Summer Conference in Mathematics, Lahore University of management Sciences (LUMS), Lahore, Pakistan.	Conference	29-30 Jul, 2006
7	The Fourth International Conference on Nonlinear Analysis and Convex analysis, Okinawa, Japan.	Conference	30 Jun-4 Jul, 2005

8	Fifth International Congress on Industrial and Applied Mathematics, Sydney, Australia.	Conference	7-11 Jul, 2003
9	26th Summer Symposium in Real Analysis, Lexington, United States.	Symposia	25-29 Jun, 2002
10	First Saudi Science Conference, Dhahran, Saudi Arabia.	Conference	9-11 Apr, 2001
11	Workshop on Algebra and Applications, Dhahran, Saudi Arabia.	Workshop	7-9 Nov, 1999
12	All Pakistan Mathematical Conference, Faisalabad, Pakistan.	Conference	24-27 Mar, 1997
13	Manila International Conference on Functional Analysis and Global Analysis, Manila, Philippines.	Conference	5-9 Oct, 1992
14	All Pakistan Mathematical Conference, Islamabad, Pakistan	Conference	1-4 Oct, 1985
15	Conference Scientific Society of Pakistan, Karachi, Pakistan	Conference	26-28 Dec, 1983
16	Urdu Science Conference, Multan, Pakistan	Conference	January, 1978

### COURSES TAUGHT KFUPM,DHAHRAN

1. Prep Year Math I , Prep Year Math II ,
2. Calculus Series (Calculus I,Calculus II, Calculus III)
3. Advanced Calculus I ,Advanced Calculus II
4. Real Analysis ( Measure Theory and Integration)
5. Functional Analysis I

### B.Z.U. UNIVERSITY ,MULTAN

1. M.Sc. : Real Analysis ,Complex Analysis ,Numerical Analysis,Functional Analysis ,Topology , Measure Theory and Integration ,Special Functions
2. M.Phil. : Functional Analysis ,Approximation Theory

### COMMITTEE WORK

#### Department of Mathematical Sciences, KFUPM, Dhahran

**Chairman** Ph.D.Dissertation Committee (Abdul-Aziz Mustafa Domlo 200652 ),  
2004-2006 .

**Chairman** Ad-Hoc Committee on choice of textbooks for Math 535 and 536 (Functional Analysis I ,Functional Analysis II) ,2004-2005.

<b>Member</b>	Graduate Committee ,2004 2005
<b>Member</b>	Teaching committee 2002-2004
<b>Member</b>	M.S. Committee, 1997-98, 1999-2000, 2001-2002.
<b>Member</b>	Excellence in teaching and guidance (ad-hoc committee), 1997-98, 2000-2001, 2001-2002.
<b>Member</b>	Library committee, 1998-99.
<b>Member</b>	Committee to write syllabi of calculus series, 1998-99
<b>Member</b>	Committee to develop courses Math 535, Math 536 and Math 537, 2000-2001.
<b>Member</b>	Undergraduate Committee, 2001-2002.

### B.Z. University, Multan

<b>Chairman</b>	Purchase committee, October 1994 - December 1996.
<b>Advisor</b>	Student Advisor, CASPAM, 1983-93.
<b>Secretary</b>	Staff Secretary, CASPAM, 1983-95.
<b>Convenor</b>	Board of Studies in Mathematics, September 1995 - December 1996.
<b>Vice-President</b>	Faculty sports association, December 1995 - December 1996.

<b>Member</b>	1. Board of Faculty of Science, Engineering and Agriculture, 1992-August 1997.
	2. Schedule Committee, CASPAM, 1983-95.
	3. Syllabi Committee, CASPAM, 1983-August 1997.
	4. Senate B.Z. University, 1988-91 and January 1996 - August 1997.
	5. Board of Studies in Mathematics ad Computer Science, 1983-September 1995
	6. Academic Council, September 1995 - August 1997.
	7. Finance and Planning Committee, October 1995 - August 1997.
	8. Board of Studies in Mathematics, 1983- August 1997.

### ADVISOR IN SELECTION BOARDS

1. Punjab Public Service Commission, Lahore, Pakistan.
2. University of Karachi, Karachi, Pakistan.
3. Quaid-I-Azam University, Islamabad, Pakistan.

### HONOURS

4. Who's who in the World (USA) 11th ed. (1993-94).
5. Who's Who in Science & Engineering (USA) 2nd ed. (1993).
6. First class first in B.Sc. Honours Examination 1973.
7. First class first in M.Sc. Mathematics Examination 1974.

### TECHNICAL EVALUATION

Evaluated cases of appointments of Professors / Associate Professors of Mathematics for the University of Karachi, Karachi, Islamia University, Bahawal Pur, University of Sargodha.

## REFERENCES

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