

# CURRICULUM VITAE

**PROF. ISMAT BEG** Ph.D. FIMA FPAS,  
Scientific Director,  
Centre for Advanced Studies in Mathematics, and  
Department of Mathematics,  
School of Science and Engineering,  
Lahore University of Management Sciences (LUMS),  
54792-Lahore, PAKISTAN

Honorary Full Professor, Institute for Basic Research, Florida, USA

*E-mail*; [ibeg@lums.edu.pk](mailto:ibeg@lums.edu.pk)

*My Erdős number* : 3

*My publications on MathSciNet*;

<http://www.ams.org/msnmain?fn=130&fmt=hl&pg1=IID&s1=197789&v1=Beg%2C%20Ismat>

*My publications on Zentralblatt MATH*;

<http://www.zentralblatt-math.org/zmath/en/search/?q=ai:beg.ismat>

## **DISTINCTIONS /SCHOLARSHIPS:**

1. Fellow, Pakistan Academy of Sciences, Pakistan.
2. Chartered Scientist, The Science Council, UK.
3. Fellow, Institute of Mathematics and Its Applications (IMA) - England.
4. Chartered Mathematician.
5. Pakistan Academy of Sciences Gold Medal 2008 in the field of Mathematics in recognition of outstanding research work.
6. First prize for published work in Mathematics, Lahore University of Management Sciences, Lahore, Pakistan 2005-6 and 2006-7.
7. First prize from National Book Council of Pakistan, Government of Pakistan, for best published research work in mathematics during the year 1986.
8. Academic Roll of Honor, from Government College, Lahore, Pakistan for the year 1972.
9. Scholarship for Doctorate in Mathematics 1978-1981.

## **RESEARCH APPOINTMENTS:**

1. Fellowship (TWAS, Italy)/Visiting Faculty Member Nankai University, People's Republic of China and Chinese Academy of Sciences (P. R. China) June 27 - August 1, 1987.
2. Visiting Mathematician, International Centre for Theoretical Physics, Trieste (Italy) June 6 - August 1, 1990
3. Group Associate Member, International Centre for Theoretical Physics, Trieste (Italy) 1992-1998.
4. Senior Mathematician, International Centre for Theoretical Physics, Trieste (Italy) Jan. 23 - Feb.3, 1997.
5. Senior Guest Scientist, International Centre for Theoretical Physics, Trieste (Italy) July 26 – Aug 4, 2002.
6. Senior Guest Scientist, International Centre for Theoretical Physics, Trieste (Italy) June 18-26, 2006
7. Member, Institute of Advanced Scientific Research, Irvine, CA, (USA) 2009 – now.
8. Honorary Full Professor, Institute for Basic Research, Florida, (USA) 2009 – now.

## **AREAS OF INTEREST:**

1. Nonlinear analysis and its applications.
2. Fuzzy set theory.
3. Order, lattices, order algebraic structure.
4. Best approximations and expansions.
5. Mathematical economics.

## **EXPERIENCE:**

1. Scientific Director, Centre for Advanced Studies in Mathematics (CASM), Lahore University of Management Sciences (LUMS), Lahore, Pakistan. *July 1, 2004 – now.*
2. Professor, Department of Mathematics, Lahore University of Management Sciences (LUMS), Lahore, Pakistan. *Aug. 21, 2001 – now.*
3. Head, Department of Mathematics, Lahore University of Management Sciences (LUMS), Lahore, Pakistan. *Aug. 21, 2001 – June 30, 2004.*

4. At Department of Mathematics, Kuwait University, Kuwait.
  - (i) Professor; *Jan. 18, 1998 to Aug. 31, 2001.*
  - (ii) Associate Professor; *Oct. 9, 1993 to Jan. 17, 1998.*
5. At Department of Mathematics, Quaid-i-Azam University, Islamabad, Pakistan.
  - (i) Associate Professor; *Sept. 29, 1991 to Oct.7, 1996.*
  - (ii) Assistant Professor; *Feb. 1, 1984 to Sept. 28, 1991.*
  - (iii) Lecturer; *Jan. 28, 1982 to Jan. 27, 1983.*
6. Associate Professor, Department of Mathematics, Pakistan Naval Engineering College, N.E.D. Engineering University, Karachi, Pakistan; *Feb. 1, 1983 to Jan. 31, 1984.*

#### **RESEARCH PROJECTS (completed as Principal Investigator):**

1. Fixed point theory and applications, sponsored by Quaid-i-Azam University, research grant No. DFNS /23-2 / 86-860 (1986-87).
2. Fixed point theory and applications, sponsored by Quaid-i-Azam University research grant No. DFNS / 23 - 2/87-1502 (1987-88).
3. Fixed point theory and applications, sponsored by National Scientific Research and Development Board of Pakistan research grant No. M.SC.(5)/QAU/90 (1991-94).
4. Random fixed point theory and its applications, sponsored by Kuwait University research grant No. SM-108 (1994-95).
5. Some random approximation theorems with applications in fixed point theory, sponsored by Kuwait University research grant No. SM-119 (1995-96).
6. Fuzzy ordered relations, sponsored by Kuwait University research grant No. SM-130 (1996-97).
7. Fuzzy multifunctions, sponsored by Kuwait University research grant No. SM-156 (1997-98).
8. Continuous fuzzy multifunctions, sponsored by Kuwait University research grant No. SM - 169 (1998-99).
9. Random multivalued functions, sponsored by Kuwait University research grant No. SM – 03/00 (2000-01).
10. Study of random fixed points, 9 months project grant sponsored by Lahore University of Management Sciences, (2004-05).
11. Fixed point theory and its applications, sponsored by Higher Education Commission, Islamabad (2008-2011) research grant No. 20-918/R&D/07.

12. Belief merging and judgment aggregation, Higher Education Commission, Islamabad (2011-2014) in process.

#### **EDITORSHIP OF JOURNALS:**

1. Member, Editorial Board for Applied and Computational Mathematics (2010- now)
2. Member, Editorial Board for Financial Mathematics and Applications (2010- now)
3. Member, Editorial Board for the Journal of Advanced Research in Fuzzy and Uncertain Systems (2009- now)
4. Member, Editorial Board for the Journal of Advanced Research in Pure Mathematics (2009- now).
5. Member, Editorial Board for the Journal of Nonlinear Sciences and its Applications (2008-now)
6. Member, Editorial Board for the Journal Nonlinear Analysis and its Applications (2008- now)
7. Member, Editorial Board for Set-Valued Mathematics and Applications (2007- now).
8. Member, Editorial Board for International Journal of Mathematics Sciences (2007- now).
9. Member, Editorial Board for Advances in Fuzzy Mathematics (2006- now).
10. Member, Editorial Board for Indian Journal of Mathematics (2006- now).
11. Member, Editorial Board for International Journal of Computational Intelligence (2006 - now).
12. Member, Editorial Board for Journal Applied Mathematics and Stochastic Analysis (2001-2005).

#### **SEMINARS/CONFERENCE TALKS/INVITED LECTURES DELIVERED (repeated seminars are excluded):**

1. Spaces of Continuous Functions, Faculty of Mathematics, University of Bucharest (Romania) - 1979.
2. Linear Operators on Locally Convex Spaces, Faculty of Mathematics, University of Bucharest (Romania) -1980.
3. Regular Operators on Banach Lattices, Faculty of Mathematics, University of Bucharest (Romania) -1980.
4. Riesz Spaces, Mathematics Department, Quaid-i-Azam University, Islamabad, (Pakistan)- 1982.

5. An Isomorphism Type Theorem, Mathematics Department, Quaid-i-Azam University, Islamabad, (Pakistan)- 1984.
6. Integral Representation of Linear Operators, International Conference on Banach spaces and Classical Analysis, Kent State University (USA) - 1985.
7. Fixed Point Theorems and Their Applications, Mathematics Department, Quaid-i-Azam University, Islamabad, (Pakistan) - 1986.
8. Dual of a Locally Convex Space, All Pakistan Mathematical Conference, Sind University, Hyderabad, (Pakistan) - 1987.
9. Normal Subspaces of Directed Vector Spaces, Mathematics Department, Quaid-i-Azam University, Islamabad, (Pakistan) - 1987.
10. Ultraproduct and Finite Representability of Banach Lattices, Mathematics Department, Quaid-i-Azam University, Islamabad, (Pakistan)-1988.
11. Coincidence Point of Multivalued Mappings, International Conference on Fixed Point Theory, CIRM, Marseille (France) - 1989.
12. Banach Lattices Isometric with AL-spaces, Mathematics Department, Quaid-i-Azam University, Islamabad, (Pakistan) - 1989.
13. Fixed Points and Coincidence Points of Compatible Multivalued Mappings, International Centre for Theoretical Physics / SISSA, Trieste (Italy) - 1990.
14. Banach Type Fixed Point Theorems for Multivalued Mappings, Mathematics Department, Quaid-i-Azam University, Islamabad, (Pakistan) - 1990.
15. Application of Riesz Spaces in Economics, Second Chittagong Conference on Mathematical Economics and its Relevance for Development, Chittagong (Bangladesh) - 1990.
16. Application of Functional Analysis in Economics, Second Regional Workshop on Applications of Mathematics, Bahawalpur (Pakistan) - 1992.
17. Mean Value Inequalities, International Centre for Theoretical Physics, Trieste (Italy) - 1993.
18. Random Fixed Points of Random Multivalued Operators, Department of Mathematics and Computer Science, Kuwait University, (Kuwait) - 1993.
19. Extension of Random Operators, Department of Mathematics and Computer Science, Kuwait University, (Kuwait)-1994.
20. Measurable Selections: In Random Approximations and Fixed Point Theory, 47th British Mathematical Colloquium, Edinburgh (UK) - 1995.

21. On Random Best Approximations, Department of Mathematics and Computer Science, Kuwait University, (Kuwait) - 1996.
22. Fuzzy Ordered Relations, International Centre for Theoretical Physics, Trieste (Italy) - 1997.
23. Random Fixed Point Theory, Department of Mathematics and Computer Science, Kuwait University, (Kuwait) - 1998.
24. Fuzzy Multifunctions, Al-Bairuni Forum 99, Kuwait University (Kuwait) - 1999.
25. Some Random Approximation Theorems with Applications, 4<sup>th</sup> International Conference on Functional Analysis and Approximation Theory, Acquafredda di Maratea, (Italy) - 2000.
26. Convex Structure in Metric Spaces, Department of Mathematics, Lahore University of Management Sciences, Lahore, (Pakistan) - 2001.
27. Convolution of Fuzzy Multifunctions and Applications, Conference in Mathematical Analysis and Applications, American University of Sharjah, (UAE) - 2001.
28. Some Applications of Fuzzy Ordered Relations, Summer Workshop and Colloquium on Mathematics, Government College University, Lahore, (Pakistan) - 2002.
29. Fuzzy Set Theory, Department of Mathematics, Government College University, Lahore, (Pakistan) - 2003.
30. Minimal Displacement of Random Variables under Lipschitz Random Maps, The 2003 UAE Mathematics Day, University of Sharjah, (UAE) - 2003.
31. Some Open Problems in Fixed Point Theory, LUMS Mathematics Day - 2003, Lahore University of Management Sciences, Lahore, (Pakistan) – 2003.
32. Impact Factors; Use and Abuse, Department of Mathematics, Lahore University of Management Sciences, Lahore, (Pakistan) – 2003.
33. Three Functions of Prices in an Economy, Mathematics Department, Lahore University of Management Sciences, Lahore, (Pakistan) – 2004.
34. Convergence of Iterative Algorithms to Common Random Fixed Points of Random Operators, International Workshop on Operator Theory and its Applications (IWOTA), Newcastle (UK) 2004.
35. Fuzzy and Rough Sets, Summer Workshop in Mathematics, Lahore University of Management Sciences, Lahore, (Pakistan) 2004.
36. Fuzzy Relations, Summer Conference in Mathematics, Lahore University of Management Sciences, Lahore, (Pakistan) 2005.

37. Fixed Point Theory in Fuzzy Setting, Summer School in Fixed Point Theory, Lahore University of Management Sciences, Lahore, (Pakistan) 2005.
38. Fuzzy Transitive Relations, 27<sup>th</sup> Linz Seminar on Fuzzy Set Theory, Johannes Kepler University, Linz, (Austria) 2006.
39. Some Open Problems in Fixed Point Theory, International Conference on Mathematics, Quaid-i-Azam University, Islamabad, (Pakistan) 2006.
40. Averaging Operators, Workshop on Fuzzy Sets and Systems, Lahore University of Management Sciences, Lahore, (Pakistan) 2006.
41. Belief Functions and Belief Merging, Workshop on Fuzzy Sets and Systems, Lahore University of Management Sciences, Lahore, (Pakistan) 2006.
42. The Contraction Mapping Principle, Weekly Seminar, Centre for Advanced Studies in Mathematics, Lahore University of Management Sciences, Lahore, (Pakistan) 2007.
43. Belief Merging and Belief Conversion, Winter Conference in Mathematics, Lahore University of Management Sciences, Lahore, (Pakistan) 2008
44. Fuzzy Mathematics; Methods, Models and Applications, Conference on Recent Advances in Mathematical Methods, Models and Applications, Lahore University of Management Sciences, Lahore, (Pakistan) 2009.
45. Fuzzy Logic: the concept of fuzziness, Summer Conference in Mathematics, Lahore University of Management Sciences, Lahore, (Pakistan) 2009.
46. Fuzzy Relational Calculus; Summer Undergraduate Research Program'10, Lahore University of Management Sciences, Lahore, (Pakistan) 2010.
47. Set-theoretic aspects of fixed point theory of multivalued operators: open problems, Weekly Seminar, Centre for Advanced Studies in Mathematics, Lahore University of Management Sciences, Lahore, (Pakistan) 2010.
48. Nonlinear Operators; Six Selected Problems, Summer Conference in Mathematics, Lahore University of Management Sciences, Lahore, (Pakistan) 2010.

### **REVIEWING and REFEREEING:**

1. Reviewer, Zentralblatt Fur Mathematik (Germany).
2. Reviewer, Mathematical Reviews (USA).
3. *Refereed papers for the following journals:* (i). J. Fuzzy Sets & Systems (The Netherlands) (ii). J. Applied Mathematics & Stochastic Analysis (USA). (iii) J. Mathematical Analysis & Applications (USA). (iv). J. Nonlinear Analysis: Theory Methods & Applications (UK). (v). J. of Positivity (The Netherlands) (vi). J.

Information Sciences (USA). (vii). Indian J. Pure & Applied Mathematics (India). (viii). Kuwait J. Science & Engineering (Kuwait). (ix). J. Natural Sciences & Mathematics (Pakistan) (x). Indian J. Mathematics (India). (xi). Revista Tecnica, Maracaibo (Venezuela). (xii). Publicationes Mathematicae Debrecen (Hungary). (xiii). Soochow J. of Mathematics (Taiwan). (xiv). Int. J. of Mathematics & Mathematical Sciences (U.S.A.). (xv). Science in China (P.R.China). (xvi) Italian J. of Pure & Applied Mathematics (Italy). (xvii) Radovi Matematicki. (xviii) Punjab University J. Mathematics (Pakistan). (xix) J. Computational & Applied Mathematics (UK). (xx) Fixed Point Theory (Romania). (xxi) Applied Mathematics Letters (USA). (xxii). Mathematics & Computer with Applications (USA). (xxiii). Fixed Point theory and Applications (USA). (xxiv) Int. J. Math. & Math. Sci. (USA) (xxv) Applications & Applied Mathematics: An Int. J. (USA). (xxvi) Mathematical & Computer Modelling (USA). (xxvii) Mathematical Communications (Czech Republic). (xxviii) Proceedings of the Pakistan Academy of Sciences (Pakistan) (xxix). Applied and Computational Mathematics (Azerbaijan) (xxx). ESAIM Probability & Statistics (xxxi). Advances in Operations Research.

4. Refereed, research projects submitted to Kuwait University, Kuwait.
5. Refereed, books submitted for publication to the Executive Bureau of Authorship, Translation and Publications, Kuwait University, Kuwait.
6. Reviewer for The Natural Sciences and Engineering Research Council of Canada (2007-12).
7. Reviewer for the research projects submitted to the Ministry of Science and Technology Development, Serbia (2010).

#### **MEMBERSHIP OF PROFESSIONAL SOCIETIES:**

1. Member, American Mathematical Society.
2. Member, European Mathematical Society.
3. Elected Member, London Mathematical Society.
4. Member, International Federation of Nonlinear Analysts.
5. Member, International Rough Set Society.
6. Chartered Member, Society for Mathematics of Uncertainty.
7. Life Member, Punjab Mathematical Society.
8. Life Member, All Pakistan Mathematical Association.
9. Life Member, Allahabad Mathematical Society.

10. Member, International Computational Intelligence Society.
11. Member, Research Group in Mathematical Inequalities and Applications.

#### **CONFERENCES ATTENDED:**

1. Romanian 1st National Symposium on 'Ordered Vector Spaces', Craiova University, (Romania) 1979.
2. Romanian 2nd National Symposium on 'Ordered Vector Spaces', Brasov University, (Romania) 1980.
3. International Conference on Banach Spaces and Classical Analysis, Kent State University, Kent, Ohio, (USA) 1985.
4. All Pakistan Mathematical Conference, Quaid-i-Azam University, Islamabad, (Pakistan) 1985.
5. All Pakistan Mathematical Conference, Sind University, Hyderabad, (Pakistan) 1987.
6. College on Global, Geometric and Topological Methods in Analysis, International Centre for Theoretical Physics, Trieste, (Italy) 1988.
7. International Conference on Fixed Point Theory and its Applications, International Centre for Mathematical Meetings (CIRM), Marseille (France) 1989.
8. Second Chittagong Conference on Mathematical Economics and its Relevance for Development, Chittagong University, (Bangladesh) 1990.
9. Second Regional Workshop on Application of Mathematics, Islamia University, Bahawalpur, (Pakistan) 1992.
10. Workshop on Representation Theory of Lie Groups, International Centre for Theoretical Physics, Trieste, (Italy) 1993.
11. 47th British Mathematical Colloquium, Edinburgh University, (UK) 1995.
12. Recent Advances in Applied Mathematics, Kuwait University, (Kuwait) 1996.
13. Spring School on Functional Analysis - 1996, Paseky, (Czech Republic) 1996.
14. School on the Mathematics in Economics, International Centre for Theoretical Physics, Trieste, (Italy) 1998.
15. Al-Bairuni Forum 99, Kuwait University, (Kuwait) 1999.
16. 4<sup>th</sup> International Conference on Functional Analysis and Approximation Theory, Acquafredda di Maratea, (Italy) 2000.
17. Conference in Mathematical Analysis and Applications, American University of Sharjah, (UAE) 2001.

18. LUMS Functional Analysis Day, Lahore University of Management Sciences, Lahore, (Pakistan) 2002.
19. Summer Workshop and Colloquium on Mathematics, Government College, Lahore, (Pakistan) 2002.
20. Negotiation Skills Programme, Rausing Executive Development Centre, Lahore University of Management Sciences, Lahore, (Pakistan) 2002.
21. 2002 South and Southeast Asia Regional meeting of Econometric Society, Lahore University of Management Sciences, Lahore, (Pakistan) 2002.
22. The 2003 UAE Mathematics Day, University of Sharjah, (UAE) 2003.
23. LUMS Mathematics Day-2003, Lahore University of Management Sciences, Lahore, (Pakistan) 2003.
24. LUMS Mathematics Day-2004, Lahore University of Management Sciences, Lahore, (Pakistan) 2004.
25. International Workshop on Operator Theory and its Applications (IWOTA), Newcastle (UK) 2004.
26. Summer Workshop in Mathematics, Lahore University of Management Sciences, Lahore, (Pakistan) 2004.
27. Winter Conference in Mathematics, Lahore University of Management Sciences, Lahore, (Pakistan) 2004.
28. Workshop on Stochastic Calculus, Lahore University of Management Sciences, Lahore, (Pakistan) 2004.
29. Workshop on Particle Physics and The Early Universe, Lahore University of Management Sciences, Lahore, (Pakistan) 2005.
30. Workshop on Computational Number Theory and Cryptography, Lahore University of Management Sciences, Lahore, (Pakistan) 2005.
31. Workshop on Data Mining, Lahore University of Management Sciences, Lahore, (Pakistan) 2005.
32. Summer Conference in Mathematics, Lahore University of Management Sciences, Lahore, (Pakistan) 2005.
33. Summer School in Fixed Point Theory, Lahore University of Management Sciences, Lahore, (Pakistan) 2005.
34. Workshop on Leading a Doctoral Mathematics Department in 21<sup>st</sup> Century, Lahore University of Management Sciences, Lahore, (Pakistan) 2005.

35. LUMS International Conference on Mathematics and its Applications, Lahore University of Management Sciences, Lahore, (Pakistan) 2005.
36. 27<sup>th</sup> Linz Seminar on Fuzzy Set Theory: Preferences, Games and Decisions, Johannes Kepler University, Linz, (Austria) 2006.
37. Summer Conference in Mathematics, Centre for Advanced Studies in Mathematics, Lahore University of Management Sciences, Lahore, (Pakistan) 2006.
38. Workshop on Fuzzy Sets and Systems, Centre for Advanced Studies in Mathematics, Lahore University of Management Sciences, Lahore, (Pakistan) 2006.
39. International Conference in Mathematics, Quaid-i-Azam University, Islamabad, (Pakistan) 2006.
40. Winter Conference in Mathematics, Centre for Advanced Studies in Mathematics, Lahore University of Management Sciences, Lahore, (Pakistan) 2006.
41. Learning Technologies and Mathematics Middle East Conference, Sultan Qaboos University, Muscat, (Oman) 2007.
42. Conference on Recent Advances in Mathematical Methods, Models and Applications, Lahore University of Management Sciences, Lahore, (Pakistan) 2007.
43. Summer Conference in Mathematics, Lahore University of Management Sciences, Lahore, (Pakistan) 2007.
44. All Pakistan Mathematical Conference, Pakistan Academy of Sciences, (Pakistan) 2007.
45. Conference on What Counts as an Educated Individual in This Day and Age, Lahore University of Management Sciences, Lahore, (Pakistan) 2008.
46. Conference on Recent Advances in Mathematical Methods, Models and Applications, Lahore University of Management Sciences, Lahore, (Pakistan) 2008.
47. Summer Conference in Mathematics, Lahore University of Management Sciences, Lahore, (Pakistan) 2008.
48. Winter Conference in Mathematics, Lahore University of Management Sciences, Lahore, (Pakistan) 2008.
49. Conference on Recent Advances in Mathematical Methods, Models and Applications, Lahore University of Management Sciences, Lahore, (Pakistan) 2009.
50. Summer Conference in Mathematics, Lahore University of Management Sciences, Lahore, (Pakistan) 2009.
51. Winter Conference in Mathematics, Lahore University of Management Sciences, Lahore, (Pakistan) 2010.

52. Conference on Recent Advances in Mathematical Methods, Models and Applications  
Lahore University of Management Sciences, Lahore, (Pakistan) 2010.
53. Summer Conference in Mathematics, Lahore University of Management Sciences,  
Lahore, (Pakistan) 2010.

#### **CONFERENCES / WORKSHOPS / SCHOOLS ORGANIZED:**

1. Member, Conference Committee, All Pakistan Mathematical Conference, Islamabad,  
Pakistan 1985.
2. Member, Organizing Committee, International Conference on Probability and  
Statistics, Islamabad, Pakistan 1991.
3. Member (i) International Scientific Committee and (ii) International Finance  
Committee, Fourth Islamic Countries Conference on Statistical Sciences (August 27-  
31, 1994) Lahore, Pakistan.
4. Member, International Program Committee of 8<sup>th</sup> Fuzzy Theory and Technology  
Conference (March 8-14, 2002), Durham, North Carolina, USA.
5. Organized, LUMS Functional Analysis Day, March 9, 2002, Lahore University of  
Management Sciences, Lahore, Pakistan.
6. Member, International Program Committee, the International Conference on  
Computational Intelligence (ICCI '2004) February 11-13, 2004, Canakkale Onsekiz  
Mart University, Canakkale, Turkey.
7. Convener, Organizing Committee, Summer Workshop in Mathematics (August 16-  
20, 2004), Lahore University of Management Sciences, Lahore, Pakistan.
8. Member, International Program Committee of 10<sup>th</sup> International Conference on Fuzzy  
Theory and Technology (July 21-26, 2005), Salt Lake City, Utah, USA.
9. Convener, Organizing Committee, Winter Conference in Mathematics (December 3-  
4, 2004), Lahore University of Management Sciences, Lahore, Pakistan.
10. Organized Workshop on Particle Physics and the Early Universe (April 2-3, 2005),  
Lahore University of Management Sciences, Lahore, Pakistan.
11. Organized Summer School in Fixed Point Theory (Aug. 1-7, 2005), Lahore  
University of Management Sciences, Lahore, Pakistan.
12. Member, Organizing Committee, Workshop on Leading a Doctoral Mathematics  
Department in 21<sup>st</sup> Century” (September 24-25, 2005), Lahore University of  
Management Sciences, Lahore, Pakistan.

13. Member, Organizing Committee, LUMS International Conference on Mathematics (Nov. 27-30, 2005), Lahore University of Management Sciences, Lahore, Pakistan.
14. Organized Workshop on Financial Mathematics (Dec. 24-25, 2005), Lahore University of Management Sciences, Lahore, Pakistan.
15. Member, Program Committee, 11th International Conference on Fuzzy Theory and Technology (FTT) (Oct 8-11, 2006), Taiwan, China.
16. Organized Workshop on Randomness and Cryptography (April 29-30, 2006), Lahore University of Management Sciences, Lahore, Pakistan.
17. Organized Workshop on Mathematics of Risk Management (Nov. 28-29, 2006), Lahore University of Management Sciences, Lahore, Pakistan.
18. Organized Workshop on Fuzzy Sets and Systems (June 10-11, 2006), Lahore University of Management Sciences, Lahore, Pakistan.
19. Organized Workshop on Data Analysis (March 10-11, 2007), Lahore University of Management Sciences, Lahore, Pakistan.
20. Organized Workshop on Intelligent Data Analysis Methods in Functional Genomics (March 17-18, 2007), Lahore University of Management Sciences, Lahore, Pakistan.
21. Member Organizing Committee, Conference on Recent Advances in Mathematical Methods, Models and Applications (April 28-29, 2007), Lahore University of Management Sciences, Lahore, Pakistan.
22. Member, Scientific Committee, 3<sup>rd</sup> National Conference on Statistical Sciences (May 28-29, 2007), NUES-FAST, Lahore, Pakistan.
23. Member Organizing Committee, All Pakistan Mathematical Conference (June 7-9, 2007), Pakistan Academy of Sciences, Islamabad, Pakistan.
24. Organized a workshop on Innovative Teaching Methodologies for Mathematics and Science Teachers (August 20-21, 2007), Lahore University of Management Sciences, Lahore, Pakistan.
25. Member Organizing Committee, Conference on What Counts as an Educated Individual in This Day and Age (April 18-19, 2008), Lahore University of Management Sciences, Lahore, Pakistan.
26. Member Organizing Committee, Conference on Recent Advances in Mathematical Methods, Models and Applications (April 26-27, 2008), Lahore University of Management Sciences, Lahore, Pakistan.

27. Member, Program Committee, 13th International Conference on Fuzzy Theory and Technology (FT&T) (Dec. 15-20, 2008), Harbin Institute of Technology, Shenzhen, China
28. Member, Advisory Committee Fifth International Conference on Statistical Sciences, NCBA&E, Lahore, Pakistan (Jan. 23-25, 2009)
29. Member Organizing Committee, Conference on Recent Advances in Mathematical Methods, Models and Applications (April 18-19, 2009), Lahore University of Management Sciences, Lahore, Pakistan.
30. Member Organizing Committee, Conference on Recent Advances in Mathematical Methods, Models and Applications (April 17-18, 2010), Lahore University of Management Sciences, Lahore, Pakistan.
31. Member Organizing Committee, Conference on Recent Advances in Mathematical Methods, Models and Applications (April 16-17, 2011), Lahore University of Management Sciences, Lahore, Pakistan.

## **TEACHING:**

### **A. Taught the following courses**

#### **Undergraduate**

(i) Calculus, (ii) Linear Algebra, (iii) Foundation of Modern Mathematics, (iv) Finite Mathematics, (v) Real Analysis, (vi) General Topology, (vii) Functional Analysis, (viii) Ordinary Differential Equations (ix) Complex Variables (x) Statistics.

#### **Graduate**

(i) Real Analysis, (ii) Functional Analysis, (iii) General Topology, (iv) Measure Theory, (v) Topological Vector Spaces, (vi) Ordered Vector Spaces, (vii) Banach Lattices, (viii) Fixed Point Theory, (ix) Set Valued Analysis, (x) Best Approximations.

### **B. Graduate Students Supervised**

#### **Advisees**

1. Asif Jamshed, 2010-11, Post Doc.
2. Asma Rashid, 2010-11, Post Doc.
3. Asma Khalid, Belief Merging and Judgment Aggregation in Fuzzy Setting – (work in progress), Ph.D.
4. Asma Rashid Butt, Fixed Point of Set Valued Maps, 2010, Ph.D.

5. Osinuga Idowu Ademola, 2010, Post Doc.
6. Khalid Mahmood Aamir, 2009-10, Post Doc.
7. Memudu Olaposi Olatinwo, 2009-10, Post Doc.
8. Samina Ashraf, 2009, Post Doc.
9. Samina Ashraf, Fuzzy Relations, 2008, Ph.D.
10. Kunle Oladeji Babalola, 2008-09, Post Doc.
11. Sarmad Abbasi, 2008-09, Post Doc.
12. Tirivanhu Chinyoka, 2007-08, Post Doc.
13. Raouf Ghomrasni, 2006-07, Post Doc.
14. Mujahid Abbas, Solution of Random Operator Equations and Inclusions, 2005, Ph.D.
15. Misbah-ul-Islam, Fuzzy Riesz Spaces, 1994, M.Phil.
16. Rashid Ali, Study of Probabilistic Spaces, 1994, M.Phil.
17. Naseer Shahzad, Random Fixed Points and Approximations, 1995, Ph.D.
18. Muhammad Arshad, Fuzzy Almost Linear Sapces, 1993, M.Phil.
19. Farhat Bashir, Approximation in Probabilistic Normed Spaces, 1993, M.Phil.
20. Akbar Azam, Fixed Points of Mutivalued Maps, 1992, Ph.D.
21. Muhammad Iqbal, Hahn-Banach Type Theorems for 2-Normed Spaces, 1992, M.Phil.
22. Naseer Shahzad, On Random Fixed Point Theorems and Applications , 1992, M.Phil.
23. Shafiq-ur-Rehaman, Fixed Point Theorems in Probabilistic Metric Spaces, 1991, M.Phil.
24. Tahira Yasmeen Minhas, Fixed Point Theorems for Generalized Contractions, 1989, M.Phil.
25. Faryad Ali, Fixed Point Theorems in Vector Lattices, 1989, M.Phil.
26. Nadeem Raza, Integral Representation of Linear Operators, 1987, M.Phil.
27. Akbar Azam, Fixed Point Theorems, 1986, M.Phil.

#### **MEMBERSHIP OF COMMITTEES and HONORARY POSITIONS:**

1. Member, Executive Council, Academic Staff Association, Quaid-i-Azam University, Islamabad, Pakistan (1982-83 & 1984-85).
2. Coordinator, Pre-print Series, Department of Mathematics, Quaid-i-Azam University, Islamabad, Pakistan (1985-1987).
3. Professor Chuan-Gan Hu, Nankai University (P.R. China) visited me in (1988) on TWAS-fellowship.

4. Coordinator, Seminar Series, Department of Mathematics, Quaid-i-Azam University, Islamabad, Pakistan (1988-1990).
5. Professor Gong Weibang, Chairman, Mathematics Department, Qufu Normal University (P.R. China) visited me in 1989 on TWAS-fellowship.
6. Associate Member, Third World Organization of Women in Sciences, Trieste, Italy (1990-2000).
7. Member, Graduate Committee, Department of Mathematics, Quaid-i-Azam University, Islamabad, Pakistan (1990-1992).
8. Student Advisor (Academic), Department of Mathematics, Quaid-i-Azam University, Islamabad, Pakistan (1990-1993).
9. Member, Board of Studies, Department of Mathematics, Quaid-i-Azam University, Islamabad, Pakistan (1991-1993).
10. Member, Board of Faculty of Natural Sciences, Quaid-i-Azam University, Islamabad, Pakistan (1991-1993).
11. Acting Chairman, Department of Mathematics, Quaid-i-Azam University, Islamabad, Pakistan (June - September 1992).
12. Member Curriculum Committee, Department of Mathematics and Computer Science, Kuwait University, Kuwait (1993-1997).
13. My biography is included in (i). Marquis Who's Who in the world [15th Edition] for 1998. (ii). International Who's Who of Contemporary Achievement (Fourth Edition) [ABI]. (iii). International Directory of Distinguished Leadership (6) (1996).
14. Member Library & Text Books Committee, Department of Mathematics and Computer Science, Kuwait University, Kuwait (1998-1999).
15. Member Seminar Committee, Department of Mathematics and Computer Science, Kuwait University, Kuwait (1999-2000).
16. Member, Committee to study the possibility of starting double major in Mathematics and Economics, Department of Mathematics and Computer Science, Kuwait University, Kuwait (1999 – 2000).
17. Member, Committee to study the possibility of opening a new Master Program in Financial Mathematics, Department of Mathematics and Computer Science, Kuwait University, Kuwait (1999-2000).
18. Member, Comprehensive Exam Committee for graduate class, Department of Mathematics and Computer Science, Kuwait University, Kuwait (2000-2001).

19. Member, Faculty Appointment and Promotion Committee, Lahore University of Management Sciences, Lahore, Pakistan (2001 – 2004).
20. Member, B.Sc. (Honors) Admission Committee, Lahore University of Management Sciences, Lahore, Pakistan (2001 – 2004).
21. Member, Steering Committee, School of Arts and Sciences, Lahore University of Management Sciences, Lahore, Pakistan (2001 – 2004).
22. Member, Academic Planning and Co-ordination Forum, Lahore University of Management Sciences, Lahore, Pakistan (2001 – 2004).
23. Member, Research Committee, Lahore University of Management Sciences, Lahore, Pakistan (2001 – 2003).
24. Participated in workshop on establishment of "School of Mathematical Sciences" (Sept. 22, 2001), Government College, Lahore, Pakistan.
25. Member, Committee for establishment of School of Mathematical Sciences, Government of Punjab, Lahore, Pakistan (2001 – 2002).
26. Convener, subcommittee on LUMS Press, Lahore University of Management Sciences, Lahore, Pakistan (2002).
27. Member, Board of Studies (Department of Mathematics), COMSATS Institute of Information Technology, Islamabad, Pakistan (2002 - 2008).
28. Member, Board of Governors, School of Mathematical Sciences, Lahore, (Pakistan) 2002 – 2004.
29. Member (expert), Selection Board, Government College, Lahore, Pakistan (2002).
30. Member, Administrative Planning Committee, Lahore University of Management Sciences, Lahore, Pakistan (2002 – 2004).
31. Member, Committee on Research and Teaching Model, Lahore University of Management Sciences, Lahore, Pakistan (2002 - 2003).
32. Member, Search Committee for Head Economics Department, Lahore University of Management Sciences, Lahore, Pakistan (2003).
33. Convener, Mathematics Graduate Committee, Lahore University of Management Sciences, Lahore, Pakistan (2003 – 2006).
34. Convener/member, Ph.D. (Mathematics) Interview Committee, Lahore University of Management Sciences, Lahore, Pakistan (Convener 2003, 2004, 2006; member 2005, 2007, 2008, 2009).
35. Member, Pakistan Academy of Sciences Committee for Pakistan's membership in International Mathematical Union (IMU) (2004- 2005).

36. Focal Person, for federation agreement between International Centre for Theoretical Physics, Trieste, Italy and LUMS (2004 - now).
37. Member, Board of Studies for Mathematics, Balochistan University of Information Technology and Management Sciences, Quetta, Pakistan (2004- 2005).
38. Convener, LUMS Research Culture Committee to study initiative to develop research culture at Lahore University of Management Sciences, Lahore, Pakistan (2004).
39. Member, Scientific Council, Centre for Advanced Studies in Mathematics, Lahore University of Management Sciences, Lahore, Pakistan (2004 – now).
40. Member, Friends of Centre for Advanced Studies in Mathematics, Lahore University of Management Sciences, Lahore, Pakistan (2004 – now).
41. Member, Postgraduate Research Committee, Department of Mathematics, University of Engineering and Technology, Lahore, Pakistan (2004 – 2006).
42. Member, Disciplinary Appeals Committee (DAC), Lahore University of Management Sciences, Lahore, Pakistan (2004-2006).
43. Acting Dean, School of Arts and Sciences, Lahore University of Management Sciences, Lahore, Pakistan (July 2005).
44. Convener, Disciplinary Appeals Committee (DAC), Lahore University of Management Sciences, Lahore, Pakistan (2006).
45. Member, Dean’s Council, School of Science and Engineering, Lahore University of Management Sciences, Lahore, Pakistan (2006 - 07).
46. Acting Head, Mathematics Department, Lahore University of Management Sciences, Lahore, Pakistan (July-August, 2006).
47. Member, Adhering Committee for Mathematics, Pakistan Academy of Sciences which represents Pakistan in International Mathematical Union (2006 - now).
48. Member, Faculty Search Committee, Mathematics Department, Lahore University of Management Sciences, Lahore, Pakistan (2006 - now).
49. Member, Mathematics Graduate Committee, Lahore University of Management Sciences, Lahore, Pakistan (2006 – now).
50. Member, Founding Steering Committee, Consortium of Universities for Research and Graduate Education (COURAGE), Kent State University, Ohio, USA (2007- now)
51. Vice President, All Pakistan Mathematical Association 2007-08.
52. Focal Person, for TWAS-UNESCO fellowship agreement between Academy of Sciences for Developing Countries, Trieste, Italy and LUMS (2007 - now).

53. Member, Graduate Committee, National University of Emerging Sciences - FAST, Lahore, Pakistan (2007-09).
54. Member, Board of Advanced Studies and Research, Department of Mathematics, Lahore University of Management Sciences, Lahore, Pakistan (2008).
55. Member, Undergraduate Admissions Committee, Lahore University of Management Sciences, Lahore, Pakistan (2009)
56. Member, Chairman Mathematics Search Committee, Lahore University of Management Sciences, Lahore, Pakistan (2009).
57. Member, Committee on the Status of Mathematics Major (BA/BSc), Lahore University of Management Sciences, Lahore, Pakistan (2010).
58. Knight, WWF - Pakistan (2010 - now).
59. Member, Convocation Committee, Lahore University of Management Sciences, Lahore, Pakistan (2010-2011).
60. Subject Expert, Board of Studies in Mathematics, International Islamic University, Islamabad, Pakistan (2010 - now).
61. Member Expert Committee (Mathematics), Pakistan Academy of Sciences, Islamabad, Pakistan (2011- now).

#### **BOOKS/CHAPTERS/SURVEY ARTICLES:**

1. *Book*; Solution of Random Operator Equations and Inclusions (ISBN 978-3-8443-1013-9), Lambert Academic Publisher, Germany **2011** (co author M. Abbas).
2. *Book*; Fixed Points of Set Valued Maps (ISBN 978-3-8433-6652-6), Lambert Academic Publisher, Germany **2010** (co author A.R. Butt).
3. *Book*; Fuzzy Relations (ISBN 978-3-8383-2069-4), Lambert Academic Publisher, Germany **2009** (co author S. Ashraf).
4. *Book chapter*; Inequalities and fixed points in Menger convex metric spaces, Book Chapter in *Fixed Point Theory and Applications* Vol. 7 (ISBN 13 978-1-59454-877-2) (chapter II, pp. 5-15) (editors: Yeol Je Cho, Jong Kyu Kim and Shin Min Kang), Nova Science Publishers, Inc., New York, **2007** (co author M. Abbas).
5. *Survey article*; Fuzzy multivalued functions, Bull. Allahabad Math. Soc., 21(**2006**), pp. 41-104.
6. *Survey article*; On fuzzy order relations, J. Nonlinear Sci. Appl., 4(**2011**) in press.

7. *Survey article*; Fuzzy relational calculus, Bulletin of the Malaysian Mathematical Sciences Society – in press (co-author S. Ashraf).