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## CURRICULUM VITAE

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### DR. IZHAR AHMAD

Associate Professor  
Department of Mathematics  
Aligarh Muslim University  
Aligarh - 202 002 (U.P.), INDIA

Father's Name : Mr. Mohammad Gufran  
Date of Birth : November 07, 1967  
Nationality : Indian  
Marital Status : Married  
Email ID : izharmaths@hotmail.com  
Passport No. : E 1263241  
Present Address : Department of Mathematics and Statistic  
King Fahd University of Petroleum and Minerals  
Dhahran-31261, Saudi Arabia

- **Academic Qualifications:**

Examinations	University	Year	Division	Subjects
B.Sc.	Meerut Univ.	1988	First	Mathematics, Physics, Chemistry
M.Sc.	University of Roorkee*	1990	First	Applied Mathematics
M.Phil.	University of Roorkee	1991	First (Hons.)	Mathematics
Ph.D.	University of Roorkee	1997	Awarded	Mathematics

\*Presently Indian Institute of Technology, Roorkee, India

- **National Test Qualified:**

Qualified **Graduate Aptitude Test in Engineering**, conducted by I.I.T. Madras on behalf of Department of Education, Ministry of Human Resource Development, Government of India in 1991 and secured 91.08 score.

- **Topic of M.Phil. Dissertation:**  
Stability of a Cometary Ionosphere/Ionopause
- **Topic of Ph.D. Thesis:**  
Optimality Conditions and Duality in Mathematical Programming
- **Scholarship Awarded:**

S.N.	Name of Scholarship	Funding Agency	Duration
1	Junior Research Fellowship	U.G.C., India	March 1992-April 1994
2	Senior Research Fellowship	U.G.C., India	April 1994-March 1997

- **Prizes/Awards :**

1. Received **IMS Prize** for presenting the Best Research Paper in **OPERATIONS RESEARCH** for the year 2002 at 68th annual conference of Indian Mathematical Society held in 2002.
2. Awarded **University Gold Medal** for securing first position in M.Phil.

- **Project Undertaken:**

1. **Minor Research Project** entitled “*Multiobjective Mathematical Programming*” No. Acad/D-826/AA/2002 (A.M.U.) for one year (2002-2003).

- **Teaching Experience:** more than Eleven years

1. **October 28, 2008 - Till Date:** Assistant Professor, Department of Mathematics and Statistics, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia.
2. **July 22, 2006 - October 27, 2008:** Associate Professor, Department of Mathematics, Aligarh Muslim University, Aligarh.
3. **March 31, 2001 - July 21, 2006:** Senior Lecturer, Department of Mathematics, Aligarh Muslim University, Aligarh.
4. **March 31, 1997 - March 30, 2001:** Lecturer, Department of Mathematics, Aligarh Muslim University, Aligarh.
5. **March 24, 1992 - March 23, 1997:** Engaging lectures and tutorials of B.E. and M.E. classes from time to time as leave arrangement.

- **Research Experience:**
  1. More than **fifteen years of research experience** in the fields of Convex Analysis and Vector Optimization.
  2. Referee for various reputed journals.
  3. M. Phil. and Ph.D. examiner of different universities.
- **Courses Taught:**
- **M. Phil.:** Linear Programming and Mathematical Programming (1997-2007).
- **Post Graduate Courses:** Laplace Transforms (2001-2003), Partial Differential Equations (2003-2007) and Nonlinear Programming (2004-till date), Ordinary Differential Equations (2006-till date) .
- **Under Graduate Courses:** Optimization Theory, Differential Equations, Computer Programming, Co-ordinate Geometry, Calculus, Numerical Analysis, Statics and Advanced Calculus.
- **Supervision:**
- **Post-Doctoral Program**
  1. **Post-Doctoral Fellowship Program of N.B.H.M., Department of Atomic Energy, Government of India, No. 40/9/2005-R&D II/2398, by Dr. Zakir Husain (In Progress)**
- **Doctoral Programs**
  1. **On Some Mathematical Programming Problems** by Zakir Husain, 2005 (Awarded).
  2. **Optimality Conditions and Duality in Vector Optimization Problems** by (Ms.) Sarita Sharma (In Progress)
  3. **Generalized Convexity and Duality in Mathematical Programming Problems** by Subhmesh Goyal (In Progress)
- **M.Phil. Programs**
  1. **Generalized Convexity and Duality in Mathematical Programming** by Saleem Khan, 2001.
  2. **Optimality Conditions for Multiobjective Programming Problems** by Zakir Husain, 2002.
  3. **Efficiency and Duality in Vector Minimum Problems** by Sarita Sharma, 2004.

4. **Generalized Convex Functions and Their Applications to Mathematical Programming** by Neha Maheshwari, 2004.
- **M. Sc. Projects**
    1. **Optimality Conditions in Nonlinear Programming Problems** in 2005.
    2. **Quadratic Programming** in 2006.
    3. **Convexity on Rimanian Manifols** in 2007.
  - **Memberships of Academic Bodies:**
    1. **Life Member, International Working Group on Generalized Convexity, U.S.A**
    2. **Life Member, The Pacific Optimization Research Activity Group, Hong Kong**
    3. **Life Member, World Scientific and Engineering Academy and Society, Athence, Greece)**
  - **Memberships of Referee's Board:**
    1. **European Journal of Operational Research, Elsevier Science**
    2. **Information Sciences, Elsevier Science**
    3. **Applied Mathematics Letters, Elsevier Science**
    4. **Journal of Computational and Applied Mathematics, Elsevier Science)**
    5. **Computers and Mathematics with Applications, Elsevier Science**
    6. **Journal of Applied Mathematics and Computing, The Korean Society for Computational and Applied Mathematics )**
    7. **Asia-Pacific Journal of Operational Research, World Scientific Press)**
    8. **Journal of Applied Analysis, Helder mann Verlag**
    9. **Opsearch**
  - **Extra Responsibilities**
  - **Academic**
    1. Delivered 06 lecturers in **Refresher Course** conducted by Academic Staff College, Jammu and Kashmir University, Srinagar, (J and K) (Sept 06,2007-Sept 10,2007).
    2. Delivered 25 lectures during a coaching program conducted by Coaching and Guidance Cell, Aligarh Muslim University, Aligarh for **National Eligibility Test-Dec 2004.**

3. Delivered lecturers in **Refresher Course** conducted by Academic Staff College, Aligarh Muslim University, Aligarh. (1998, 1999).
  4. Taught an special course of mathematics in **Post Graduate Diploma in Hydrogeology**, Department of Geology, Aligarh Muslim University, Aligarh (1997-2000).
- **Administrative**
    1. **Assistant Superintendent of Examinations** in Department of Mathematics, Aligarh Muslim University, Aligarh (2001-Till Date).
    2. **Warden**, Mohd. Habib Hall, Aligarh Muslim University, Aligarh (November 2004-Aug 11, 2007).
    3. **Computer Lab Incharge**, Department of Mathematics, Aligarh Muslim University, Aligarh (1997-2006).
  - **List of Publications:**
    1. Efficiency and duality in multiobjective fractional programming (with T.R.Gulati), **Opsearch**, 32(1995), 31-43.
    2. Second order symmetric duality for nonlinear minimax integer programs (with T.R.Gulati), **European Journal of Operational Research**, 101(1997), 122-129.
    3. Symmetric duality for nondifferentiable minimax mixed integer programming problems (with T.R.Gulati and I.Husain), **Optimization**, 39( 1997), 69-84.
    4. Optimality conditions and duality in nondifferentiable multiobjective programming (with T.R.Gulati), **Mathematics and its Applications in Engineering and Industry**, Eds. Bani Sing et al., Narosa Publishing House, New Delhi, 1997,76-84.
    5. Multiobjective duality using Fritz John conditions (with T.R.Gulati) ,**Asia - Pacific Journal of Operational Research**, 15(1998), 63-74.
    6. Symmetric duality for minimax variational problems (with T.R.Gulati and I.Husain), **Mathematical Methods of Operations Research** , 48(1998), 81-96.
    7. Second order symmetric duality with generalized convexity (with T.R.Gulati and I.Husain), **Opsearch**, 38(2001), 210-222.
    8. Optimality conditions for nondifferentiable multiobjective fractional programming problems (with T.R.Gulati), **Mathematical Modeling** , Eds. Bani Sing et al., Tata McGraw-Hill Publishing Company, New Delhi, 2001, 196-201.
    9. Optimality conditions and duality in fractional minimax programming involving generalized  $\rho$ -convexity, **International Journal of Management and Systems**, 19(2003) ,165-180.

10. Sufficient optimality conditions for nondifferentiable programming , **Aligarh Bulletin of Mathematics**, 22 (2003), 113-117 .
11. On nondifferentiable second order symmetric duality in mathematical programming (with Z. Husain), **Indian Journal of Pure and Applied Mathematics** 35(2004), 665-676.
12. Optimality conditions and mixed duality in nondifferentiable programming, **Journal of Nonlinear and Convex Analysis**, 5(2004),113-119 .
13. Sufficient and duality in multiobjective programming with generalized  $(F, \rho)$ -convexity,**Journal of Applied Analysis**, 11(2005),19-32.
14. On nondifferentiable second order symmetric duality (with Z. Husain), **Asia-Pacific Journal of Operational Research**,22(2005), 19-31.
15. Second order symmetric duality in nondifferentiable multiobjective programming,**Information Sciences** , 173 (2005),23-34.
16. Multiobjective mixed symmetric duality with invexity, **New Zealand Journal of Mathematics**, 34(2005),1-9.
17. Nondifferentiable second order symmetric duality in multiobjective programming (with Z. Husain), **Applied Mathematics Letters**, 18(2005), 721-728.
18. Mixed type duality for multiobjective variational problems with generalized  $(f, \rho)$ -convexity (with T. R. Gulati), **Journal of Mathematical Analysis and Applications**, 306(2005), 669-683.
19. Second order symmetric duality for nondifferentiable minimax mixed integer programs, **Southeast Asian Bulletin of Mathematics**, 29(2005), 843-849.
20. On symmetric duality in nondifferentiable mathematical programming with F-convexity (with Z. Husain), **Journal of Applied Mathematics and Computing**, 19(2005), 371-384.
21. Duality in nondifferentiable fractional minimax programming (with T. R. Gulati and A. Ahmed ), **Journal of Indian Society of Statistics and Operations Research**, 26(2005), 13-25.
22. Symmetric duality for multiobjective fractional variational problems with generalized invexity, **Information Sciences**, 176(2006), 2192-2207 .
23. Duality in nondifferentiable minimax fractional programming with generalized convexity (with Z. Husain), **Applied Mathematics and Computation**, 178(2006), 545-551.
24. Second order  $(F, \alpha, \rho, d)$ -convexity and duality in multiobjective programming (with Z. Husain), **Information Sciences**, 176(2006),3094-3103.
25. Optimality conditions and duality in nondifferentiable minimax fractional programming with generalized convexity (with Z. Husain), **Journal of Optimization Theory and Applications**, 129(2006), 255-275.

26. Mixed symmetric duality for nondifferentiable programming problems (with T.R. Gulati), **Opsearch**, 43(2006), 296-308.
27. Minimax mixed integer symmetric duality for multiobjective variational problems (with Z. Husain), **European Journal of Operational Research**, 177(2007), 71-82.
28. Symmetric Duality for Fractional Variational Problems with Cone Constraints (with M. Yaqoob and A. Ahmed), **Journal of Applied Mathematics and Computing**, 23(2007), 281-292.
29. Sufficiency and duality in multiobjective programming under generalized type-I functions (with T.R. Gulati and Divya Agarwal), **Journal of Optimization Theory and Applications**, 135(2007), 411-427 .
30. Sufficiency in multiobjective subset programming involving generalized type-I functions (with Sarita Sharma), **Journal of Global Optimization**, 39(2007), 473-481 .
31. Optimality conditions and duality in nonsmooth multiobjective optimization, (with Sarita Sharma), **Journal of Nonlinear and Convex Analysis**, 8(2007), 417-430.
32. Second order duality for nondifferential multiobjective programming problems (with Sarita Sharma), **Numerical Functional Analysis and Optimization**, 28 (2007), 975-988.
33. Higher order duality in nondifferentiable multiobjective programming, (with Z. Husain and Sarita Sharma), **Numerical Functional Analysis and Optimization**, 28 (2007), 989-1002.
34. Multiobjective fractional symmetric duality involving cones, (with Sarita Sharma), **Journal of Applied Mathematics and Informatics**, 26(2008), 151-160.
35. Symmetric duality for multiobjective fractional variational problems involving cones, (with Sarita Sharma), **European Journal of Operational Research**, 188(2008), 695-704.
36. Second order duality in nondifferentiable minmax programming involving type-I functions (with Z.Husain and Sarita Sharma), **Journal of Computational and Applied Mathematics**, 215(2008), 91-102.
37. Second-order symmetric duality with cone constraints, (with T.R. Gulati and S.K. Gupta), **Journal of Computational and Applied Mathematics**, 220(2008), 347-354.
38. Note on MondWeir type nondifferentiable second order symmetric duality, (with Z.Husain), **Optimization Letters**, 2(2008), 599-604 .
39. Sufficiency and duality in minmax fractional subset programming involving generalized type-I functions (with Sarita Sharma), **Journal of Applied Mathematics and Informatics** (2008) (to appear).

40. Second order duality in multiobjective programming (with Z. Husain), **Journal of Applied Analysis**, 14(2008), 131-148 .
41. Higher Order Duality in Nondifferentiable Minimax Programming with Generalized Type-I Functions, **Journal of Optimization Theory and Applications** (with Z. Husain and Sarita Sharma) (To Appear).
42. Second order duality for nondifferentiable minimax programming problems with generalized convexity **Journal of Global Optimization** (with Z. Husain and Anurag Jayswal) (To Appear).
43. Second order duality for minmax fractional programming, **Optimization Letters** (with Z. Husain and Sarita Sharma)

• **Details of participation in Conferences / Workshop / Summer School:**

1. Participated in the First Annual Conference of ISIAM, held in the department of Mathematics, University of Roorkee, **Roorkee**, during Feb. 04-07, 1993.
2. Presented a paper on “Efficiency and duality in multiobjective fractional programming” at the Second International Symposium on Optimization and Statistics, held in the department of Statistics and Operations Research , AMU, **Aligarh**, during Nov. 02-04, 1993.
3. Presented a paper on “Efficiency and duality using Fritz John conditions in multiobjective programming” at the 83rd session on the Indian Science Congress Association organized by the Punjabi University, **Patiala**, during Jan. 03-08, 1996.
4. Presented a paper on ”Optimality conditions for nondifferentiable multiobjective fractional programming problems” at the International Conference on Mathematical Modeling, held in the department of Mathematics, University of Roorkee, **Roorkee**, during Jan. 29-31, 2001.
5. Presented a paper on “Multiobjective mixed symmetric duality with invexity” at the Emerging Trends in Mathematics, held in the Department of Mathematics, AMU, **Aligarh**, during Mar. 24-26,2001.
6. Participated in training program on **Natural Language Processing** sponsored by Department of Electronics,Government of India, conducted at Dept. of Electronics and Computer Engineering, University of Roorkee, **Roorkee** during May 30, 1994 to July 02, 1994.
7. Participated in the **Academic Staff Orientation Programme**, conducted by the Academic Staff College, A M U, **Aligarh**, from 15.11.1999 to 14.12.1999.
8. Participated in the **Refresher Course**, conducted by the Academic Staff College, A M U, **Aligarh**, from 23.07.2001 to 12.08.2001.
9. Presented a paper on ”Optimality conditions for multiobjective fractional programming problem” at the 68th annual conference of Indian Mathematical

Society , held in the department of Mathematics, Shivaji University , **Kolhapur**, during Dec. 20-23, 2002.

10. Presented a paper ” Second order duality in multiobjective programming” at the 71st annual conference of Indian Mathematical Society , held in the department of Mathematics, Indian Institute of Technology , **Roorkee**, during Dec. 26-29, 2005.
11. Presented a paper ” Second order duality in multiobjective programming” at the 71st annual conference of Indian Mathematical Society , held in the department of Mathematics, Indian Institute of Technology , **Roorkee**, during Dec. 26-29, 2005.
12. Presented a paper ” Mutiobjective fractional symmetric duality” at the 71st annual conference of Indian Mathematical Society , held in the department of Mathematics, Indian Institute of Technology , **Roorkee**, during Dec. 26-29, 2005.

• **References**

Full Name	Address
Professor Zafar Ahsan	Department of Mathematics, Aligarh Muslim University Aligarh-202002 (INDIA) Email: zafar.ahsan@rediffmail.com
Professor T.R. Gulati	Department of Mathematics, Indian Institute of Technology Roorkee-247 667 (INDIA) Email: trgmaitr@rediffmail.com
Professor Afzal Beg	Department of Mathematics, Aligarh Muslim University Aligarh-202002 (INDIA) Email: abegamu@yahoo.co.in

- **Impact Factor**

Name of Journals	No. of Papers	Impact Factor		Total Impact Factor
		2005	2006	
Optimization	01	.325	.500	.500
Asia-Pacific J. Oper. Res.	02	.333	.375	.750
European J. Oper. Res.	03	.824	.918	2.754
Math. Meth. Oper. Res.	01	.259	.388	.388
Information Sci.	03	.723	1.003	3.009
Indian J. Pure Appl. Math.	01	.073	.109	.109
J. Math. Anal. Appl.	01	.579	.758	.758
J. Optim. Theory Appl.	02	.612	.633	1.266
Appl. Math. Lett.	01	.345	.546	.546
Appl. Math. Comput.	01	.688	.816	.816
J. Global Optimization	01	.662	.568	.568
J. Computational Appl. Math	02	.589	.759	1.518
Num. Funct. Anal. Optim.	02	.405	.405	.810
	21	Grand Total		13.792

- **Impact Factor During Lecturership**

Name of Journals	No. of Papers	Impact Factor		Total Impact Factor
		2004	2005	
Optimization	01	.206	.325	.325
Asia-Pacific J. Oper. Res.	02	.457	.333	.666
European J. Oper. Res.	03	.605	.824	2.472
Math. Meth. Oper. Res.	01	.577	.259	.259
Information Sci.	03	.447	.723	2.169
Indian J. Pure Appl. Math.	01	.129	.073	.073
J. Math. Anal. Appl.	01	.473	.579	.579
J. Optim. Theory Appl.	02	.583	.612	1.224
Appl. Math. Lett.	01	.395	.345	.345
Appl. Math. Comput.	01	.567	.688	.688
	16	Grand Total		8.800

• Citation Report

Ref.	Document	Cited By	Cited Therein
Vol. 101 (1997) EJOR	Second order symmetric duality for nonlinear minimax mixed integer programs	11	EJOR, 127(2000), 507-518 EJOR, 144(2003), 554-559 JMAA, 284(2003), 250-265 EJOR, 170(2006),355-362 I APJOR, 22(2005), 19-31 IJPAM, 35(2004), 665-676 EJOR, 167(2005), 28-34 SEABM, 29(2005), 1-7 JMAA, 329(2007), 229-237 J.Chengdu,34(2007), 107-110 APJOR, 24(2007), 737-740
Vol. 15 (1998) APJOR	Multiobjective duality using Fritz John conditions	02	OPTIM., 55(2006), 405-428 EJOR, 177 (2007), 71-82
Vol. 48 (1998) MMOR	Symmetric duality for minimax variational problems	02	INS, 176(2006), 2192-2207 APJOR, 23 (2006), 155-170
Vol. 39 (1998) Optimiz.	Symmetric duality for nondifferentiable minimax mixed integer programming problems	04	APJOR, 22(2005), 19-31 IJPAM, 35(2004), 665-676 JAMC, 19(2005), 371-384 EJOR, 170(2006), 355-362
Vol. 38 (2001) Opsearch	Second order symmetric duality with generalized convexity	07	SEABM, 29(2005), 1-7 INS, 173(2005), 23-34 APJOR, 22(2005), 19-31 AML, 18(2005), 721-728 JMAA, 310(2005), 247-253 JMAA, 329(2007), 229-237 APJOR, 24(2007), 737-740

Vol. 19 (2003) IJMS	Optimality conditions and duality in fractional minimax programming involving generalized $\rho$ -invexity	03	ABM, 23(2004), 117-122 JOTA, 129(2006) ABM, 22(2003), 113-117
Vol. 22 (2003) ABM	Sufficient optimality conditions for nondifferentiable fractional minimax programming	01	ABM, 23(2004), 117-122
Vol 35 (2004) IJPAM	On nondifferentiable second order symmetric duality in mathematical programming	02	JMAA 310(2005),247-253 JMAA 329(2007), 229-237
Vol. 11 (2005) JAA	Sufficiency and duality in multiobjective programming with generalized $(F, \rho)$ -convexity	01	INS, 176(2006),3094-3103 JOTA, 129(2006),255-275
Vol. 22 (2005) APJOR	Nondifferentiable second order symmetric duality generalized $(F, \rho)$ -convexity	02	AML, 18(2005), 721-728 APJOR 24(2007), 737-740
Vol. 173 (2005) INS	Second order symmetric duality in nondifferentiable multiobjective programming	01	INS 176(2006), 3094-3103
Vol. 176 (2006) INS	Symmetric duality for multiobjective ifractional variational problems with generalized invexity	03	INS 176(2006), 3094-3103 INS 178 (2008), 1189-1204 INS (2008)(J.Xu and Y.Liu)
Vol. 129 (2006) JOTA	Optimality conditions and duality in nondifferentiable minimax fractional programming with generalized convexity	02	JCAM (2007) (to appear) INS(2008)(J.Xu and Y.Liu)

Date:

( Dr. Izhar Ahmad )