Title	*Prof. (Dr.)*	First Name	*RATNESH RAJAN*	Last Name	*SAXENA*	Photograph
Designation Official Address	***PROFESSOR-MATHEMATICS*** ***Dept. of Mathematics, D.D.U. College (University of Delhi)*** ***Sector-3, Dwarka, Delhi-110-078***					
Residential Address	***04013- ATS Advantage,*** ***17-Ahinsa Khand, Indirapuram, Ghaziabad-201014,*** ***Uttar Pradesh, INDIA.***					
Phone No Office	***011-41805580,45051037***					
Mobile (psnl.)	***0-99101-00961***					
Email	***rsaxena@ddu.du.ac.in*** ***(official)*** ***ratnesh65@gmail.com*** ***(personal)***					
Relevant links and member	Official Page (DDU College) Resume ResearchGate ORCID/SCOPUS WoS/Publon Google Scholar LinkedIn ***DU alumni-page***					

Educational Qualifications

Degree	Institution	Year
Ph.D.	***Dept. of Mathematics, University of Delhi, India.*** ***Title: "On some aspects of Multi-objective Set Covering and Fixed Charge Problems"***	***2001***
M.Phil.	***Dept. of Mathematics, University of Delhi, India.*** ***Title: "A Study of Parametric Analysis in Mathematical Programming"***	***1990***
PG- M.Sc. Mathematics	***Hansraj College, University of Delhi, India.***	***1988***
UG- B.Sc. (Hons.) Math	***S.G.T.B. Khalsa College, University of Delhi, India.***	***1986***

Career Profile **Total Teaching Experience:** *30+ years* ***(Amended September - 2022)***

1991-till date:
Department of Mathematics D.D.U. College, University of Delhi, India ***(started as part time lecturer in Oct.1991, , got permanent on 01.09.1992)***
At Present working as ***Professor, since July-2018,*** *Duties involve: Research in Mathematical Programming and Teaching various courses to under-graduate/post-graduate students majoring in Mathematics, Preparing and evaluating assignments and counselling the students.*

1989-1991:
S.G.T.B. Khalsa College, University of Delhi, Delhi, India
Worked as a Lecturer(ad-hoc)for 200 days with breaks, Department of Mathematics

1989:
Indian Institute of Technology, Delhi, India
Worked as a S.R.A. in a Project sponsored by the Department of Science and Technology, Government of India

Visiting Faculty/Counselor

- *Dept. of Mathematics, University of Delhi, India. (M.A./M.Sc. Classes) 2008-2013*
- *School of Comp. & Syst. Sc., Jawaharlal Nehru University,(MCA Classes) 2007-09*
- *Indira Gandhi National Open University, India (MBA Course Classes) 1994-1998*

Administrative/Academic Assignments at D.D.U. College, University of Delhi

2022-23
Member- Academic Council of Delhi University
Member-Admission committee CIC-University of Delhi
Member-Standing committee Students-University of Delhi
Convener-Academic Development Committee DDUC

2021-22
Member- Academic Council of Delhi University
Member-Admission committee CIC-University of Delhi
Member-Standing committee Students-University of Delhi
Member-Academic Development Committee DDUC

2020-21
Member- Academic Council of Delhi University
Member-Admission committee CIC-University of Delhi
Member-TWF society, University of Delhi 2019-21
Member-Standing Committee-Academics-University of Delhi 2019-21
Member-Mathematical Sciences Courses Admission Committee, University of Delhi 2019-21
Member-Interim Task Force Committee- University of Delhi 2019-21

2019-20
Supervisor of two month Summer Internship (20.05.2019-28.06.2019) to the following students of M.Sc.(Applied Mathematics) of Amity University:
(i) Ms. Simran - topic 'on Fuzzy Transportation Problem'
(ii) Ms. Harshita Guruani - topic 'on Fuzzy Transshipment Problem'
(iii) Ms. Sonam Yadav - topic 'On fuzzy Game Theory'
Supervise IV semester project-work with dissertation submission of the following two students of M.Sc.(Applied Mathematics) of Amity University..
(i) Ms. Simran
(ii) Ms. Harshita Gururani
Member- Gandhi Study Circle-DU ,DDUC-center (2019-20 & 2020-21)
Member- Academic Supervisory Committee DDUC
Member-Admission Committee-Mathematics-DDUC
Member-Time Table Committee-DDUC
Member- Academic Council of Delhi University for two years 2019-21
Member-Standing Committee-Academics-University of Delhi 2019-21
Member-Mathematical Sciences Courses Admission Committee, University of Delhi 2019-21
Member-Interim Task Force Committee- University of Delhi 2019-21

2018-19
Moderator of IGNOU UG/PG examinations-Paper Linear Programming Problem/Operations Research
Member- Academic Supervisory Committee DDUC
Coordinator of two day Mini-Symposium-Mathematics at DDU College Feb.,2019

2017-18
Teacher- in-Charge of the department of Mathematics, D.D.U. College (D.U.), Convener Academic Development Committee of the College

2016-17
Teacher- in-Charge of the department of Mathematics, D.D.U. College (D.U.), member Academic Development Committee of the College

2015-16
Secretary: Staff Council, Committee Member: Research Committee, Time Table Committee, D.D.U. College

2014-15
Secretary: Staff Council, Coordinator Admission Committee, Member: Research Committee, D.D.U. College

2013-14
Coordinator: Foundation Courses FYUP,
Convener: Course Committee- Differential Equation-FYUP-DU, Time Table Committee- D.D.U. College

2012-13
Member: Time Table committee - D.D.U. College

2009-10
Vice Principal, Admission Coordinator: D.D.U. College (D.U.)

1994-98
Teacher in-Charge of the Department of Mathematics of D.D.U. College, (D.U.)
Examiner/Evaluator for the bachelor/master degree University Examinations since 1994.

Areas of Interest / Specialization

- *Technique formulation for the solutions of Single and Multi-objective Linear and Non-Linear Set Covering, Set Partitioning and Set Packing Problems,*
- *Fuzzy Mathematical Programming Problems,*
- *Portfolio-Optimization*

Subjects Taught in academic year 2021-2022

Calculus with practical	*B.Sc.(h) Mathematics, 1st semester*	Full paper
LPP & Theory of Games	*B.Sc.(h) Mathematics, 6th semester*	Shared paper
Differential Equation with practical	*B.Sc.(h) Mathematics, 2nd semester*	Shared paper
Linear Programming & Game Theory -Generic Paper	*B.Sc.(h) except math(h), 3rd semester*	Full paper

Research Guidance: M.Phil./Doctoral Degree Research Projects/Research Articles

- ***Independent Supervision of M.Phil. Program in the subject of Mathematical Programming Completed -04 Under process of pursuing- 01***

s.n.	Name	Title	Status
1	*Sanjay Kumar*	*On Some aspects of Fuzzy Integer Linear Programming Problems*	*Degree awarded 2011*
2	*Abhay Kumar*	*Some Fuzzy Matrix Games*	*Degree awarded 2014*
3	*Poonam Verma*	*Portfolio Optimization with Various Risk Measures & Structured Products*	*Degree awarded 2015*
4	Aparna	*Fuzzy Transportation and Cost & Time Minimizing Transshipment Problems*	Degree awarded- 2020
5	Ruhi	Mathematical Programming	Pursuing Since- 2021

- ***Independent Supervision of Doctoral Degree Projects, in the subject of Mathematical Programming Completed-6 Pursuing -2 [one under joint supervision]***

s.n.	**Name**	**Title/category**	**Status**
1	*MUDITA UPAMANYU BRS/(MS)/2010/378*	*Imprecise Multi Objective Set Covering and Fuzzy Fixed Charge Problems*	*Degree awarded 2017*
2	*RASHMI GUPTA BRS/(MS)/2010/969*	*Algorithms for nonlinear set covering, partitioning, packing and fuzzy problems*	*Degree awarded 2018*
3	*RITIKA CHOPRA BRS/(MS)/2010/371*	*Possibilistic, Intuitionistic and Fuzzy Multi-Objective Linear Programming Problems*	*Degree awarded 2018*
4	*MEENA BAWEJA BRS/(MS)/2011/2061*	*"Multi-Period Portfolio Optimization with Structured Product"*	*Degree awarded 2018*
5	*SANJIV GUPTA BRS/(MS)/2011/3054*	*Matrix Games with Fuzzy payoffs*	*Degree awarded 2018*
6	ASHOK KUMAR BRS//248/2017/85	*Transportation and Transshipment Problems in Intuitionistic Fuzzy and Neutrosophic Environment*	Successfully defended his Ph.D. thesis on 23rd August 2022.
7	APARNA	Mathematical Programming	Pursuing Since 2021
8	JITENDRA SINGH	Mathematical Programming	Pursuing Since-2021 Jointly with Dr. Pankaj Kr. Garg

Project-0: (Self) Doctoral degree project is completed by me Under supervision of (Dr.) S. R. Arora

- *Title: The title of the Research Project was: "**On some aspect of Multi-Objective Set Covering and Fixed Charge Problems"***

Ph.D. degree awarded in 2001 by University of Delhi.
Following research articles were published by us:

- 1. Enumeration Technique for Solving the Multi-objective Linear Set Covering Problem,
  Asia-Pacific Journal of Operational Research 12 (1), 87-97, (1995) **ISSN 0217 5959**

[UGC listed; Indexed in- SCOPUS, SCIE]

- 2. A linearization technique for solving the quadratic set covering problem,
  Optimization 39 (1), 33-42, (1996) **ISSN 0233-1934**

[**UGC listed; Indexed in- SCOPUS, SCIE]**

- 3. Relation between set covering and set partitioning problem,
  Indian J. Pure Appl. Math. (INSA) 28 (7), 865-876,(1997) **ISSN 0019-5588**

[**UGC listed; Indexed in- SCOPUS, SCIE]**

- 4. Cutting Plane Technique for the Multi-Objective Set Covering Problem with Linear Fractional Objective Functions, ***IJOMAS*** *14 (1), 111-122, (1998)* ***ISSN*****: 0970-0439**

[**UGC not listed, Peer Reviewed]**

- 5. Linearization approach to multi-objective quadratic set covering problem,
  Optimization 43 (2), 145-156, (1998) **ISSN 0233-1934**

[**UGC listed; Indexed in- SCOPUS, SCIE]**

- 6. A Note on Solving Non-Linear Fractional Multi-Objective Set Covering Problem,
  IJOMAS 15 (1), 77-88, (1999) ISSN **0970-0439**

[**UGC not listed, Peer Reviewed]**

Persistence of Research

- 7. Linear Programming Problems with Coefficients as Trapezoidal intuitionistic fuzzy numbers,
  Advances in fuzzy Mathematics, 14 (1) pp.:41-52, (2019) **ISSN 0973-533X**

[**UGC- listed; indexed in- ICI, Peer Reviewed]** (with Ritika-jan-june-2019)

- 8. Portfolio Optimization with Option: A Case Study,
  International Journal of Agricultural and Statistical Sciences,Vol.14 (2),pp.:511-517 (2018), **ISSN 0973 1903,**

[**UGC listed; Indexed in- SCOPUS]** (with Meena-Jul-dec.-2018)

- 9. Portfolio Optimization using Modified Information Ratio,
  Indian Journal of Applied Research, 7(1), 15-16, (2017) **ISSN: 2249 555X**

[**UGC listed; Indexed in- Copernicus, Peer Reviewed]** (with Meena)

- 10. Efficiency Evaluation of the Energy Companies in CNX 500 Index of the NSE,India using Data envelope Analysis
  Benchmarking: An International Journal, Vol.23(1), pp.113-126, (2016) **ISSN 1463-5771**

[**UGC listed; Indexed in- SCOPUS]** (with Punita and Deepak)

- 11. Relation between set partitioning and set covering problems with quadratic fractional objective functions
  OPSEARCH 48 (3), 247-256, (2011) **ISSN 0030-3887**

[**UGC listed; Indexed in- SCOPUS]** (with Ravi)

- 12. Measuring efficiencies in Indian public road transit: a data envelopment analysis approach,
  OPSEARCH 47 (3), 195-204, (2010) **ISSN 0030-3887**

[**UGC listed; Indexed in- SCOPUS]** (with Punita)

- 13. Enumeration technique for set covering problems: a combinatorial approach,
  Journal of Interdisciplinary Mathematics 9 (2), 421-430, (2006) **ISSN 0972-0502**

[**UGC listed; Indexed in- SCOPUS]** (with Rashmi)

- 14. An Algorithm For Quasi-Convex Set Covering Problem,
  IJOMAS 20 (2), 205-218, (2004) **ISSN 0970-0439**

[**UGC not listed, Peer Reviewed]** (with SRA sir)

Project-1: Ph.D. Project is completed by Ms. Mudita Upamanyu under my supervision on project title: "Imprecise Multi Objective Set Covering and Fuzzy Fixed Charge Problems"
Ph.D. degree awarded to her in 2017 by University of Delhi.
Following research articles were published by us:

- A Compromise Method for Solving Fuzzy Multi-Objective Fixed Charge Transportation Problem, *Lecture Notes in Management Science, Vol. 8, 8-15,(2016)*. **ISSN: 2008-0050**

[**UGC not listed, Peer Reviewed, Conference presentation/proceeding]**

- 15. On Solving a Multi-Objective Fixed Charge Problem with Imprecise Fractional Objectives, *Applied Soft Computing, Vol. 40, 64-69,(2016*. **ISSN 1568-4146**

[**UGC listed; Indexed in- SCOPUS, SCIE]**

- 16. On Solving Multi-Objective Set Covering Problem with Imprecise Linear Fractional Objectives, *RAIRO-Operations Research, Vol. 49(3), 495-510, (2015).* **ISSN 0399-0559**

[**UGC listed; Indexed in- SCOPUS, SCI]**

- 17. Linearization Approach to Multi Objective Set Covering Problem with Imprecise Nonlinear Fractional Objectives,
  OPSEARCH,Vol. 52(3), 597-615, (2015). **ISSN 0030-3887**

[**UGC listed; Indexed in- SCOPUS]**

- 18. Obtaining a Compromise Solution of a Multi Objective Fixed Charge Problem in a Fuzzy Environment, *International Journal of Pure and Applied Mathematics, Vol. 98 (2), 193- 210, (2015).* **ISSN 1311-8080**

[**UGC listed; Indexed in- SCOPUS]**

- 19. Multi-objective Linear Set Covering Problem with Imprecise Objective Functions, *International Journal for Research in IT, Management & Engineering, Vol. 2(3), 28-42, (2012)*. **ISSN 2249-1619**

[**UGC not listed, Peer Reviewed]**

Project-2: Ph.D. Project is completed by Ms. Ritika Chopra under my supervision on project title: "Possibilistic, Intuitionistic and Fuzzy Multi-Objective Linear Programming Problems"
Ph.D. degree awarded to her in 2018 by University of Delhi.
Following research articles were published by us:

- 20. Solving Fuzzy Linear Programming Problems with Bell-Shaped Membership Functions, *The Journal of fuzzy Mathematics, vol. 25, Issue-4, pp.795-804, 2016*. **ISSN: 1066-8950**

[**UGC- listed, Peer Reviewed]**

- 21. Type-2 Fuzzy Linear Programming problem with interval valued linear programming approach, *The Journal of fuzzy Mathematics, 23(4), 813-820, (2015).* **ISSN: 1066-8950**

[**UGC- listed, Peer Reviewed]**

- 22. Possibilistic linear programming with triangukar intuitionistic fuzzy numbers, *Advances in fuzzy mathematics, 10(1) 91-98, (2015).* **ISSN 0973-533X**

[**UGC- listed; Peer Reviewed]**

- 23. An Approach to Solve a Possibilistic Linear Programming Problem, *Applied Mathematics, 5, 226-233, (2014)* **ISSN 2152-7393**

[**UGC-listed, Indexed in- SCOPUS]**

- 24. Model for Solving Fuzzy Multiple Objective Problem,
  American Journal of Operations Research, 3, 65-69, (2013). **ISSN 2160-8849**

[**UGC-not listed, Peer Reviewed]**

Project-3: Ph.D. Project is completed under my supervision by Ms. Meena Baweja on project title: "Multi-Period Portfolio Optimization with Structured Product"
Ph.D. degree awarded to her in 2018 by University of Delhi.
Following research articles were published by us:

- 25. Portfolio Optimization using Conditional Sharpe Ratio,
  International Letters of Chemistry, Physics and Astronomy, vol.53, pp:130-136, (2015) **ISSN: 2299-3843**

[**UGC-not listed, Indexed in-WorldCat, Peer Reviewed]**

- 26. Optimal Investment Problem with Option,
  International Journal of Applied Mathematics, Vol.28 (4), pp:363-376,(2015) **ISSN: 1311-8080**

[**UGC-not listed, Indexed in-WorldCat, Indexed in- SCOPUS]**

- *27.* Portfolio Optimization with Structured Products under Return Constraint,
  Yugoslav Journal of Operations Research 24(2), (2015) **ISSN: 0354-0243**

[**UGC listed; Indexed in- SCOPUS]**

- 28. Solving Portfolio Optimization Problems with Structured Products,
  International Journal of Pure and Applied Mathematics 93 (1), 147-154,(2014) **ISSN 1311-8080**

[**UGC listed; Indexed in- SCOPUS]**

Project-4: Ph.D. Project is completed under my supervision by Ms. Rashmi Gupta on project title: "Algorithms for nonlinear set covering, partitioning, packing and fuzzy problems"
Ph.D. degree awarded to her in 2018 by University of Delhi.
Following research articles were published by us:

- 29. Fuzzy Linear Fractional Set Covering Problem with Imprecise Costs,
  RAIRO-Operations Research 48 (03), 415-427(2014) **ISSN 0399-0559**

[**UGC listed; Indexed in- SCOPUS, SCI]**

- 30. Set Packing problem with Linear fractional objective function,
  International journal of Mathematics and computer application research (IJMCAR),4(1) 9-18,(2014) **ISSN 2249 6955**

[**UGC-not listed, Peer Reviewed]**

- 31. Linearization Technique for solving Quadratic set Packing and Partitioning Problems , *International journal of Mathematics and computer application research (IJMCAR),4(4), 9-20(2013)* **ISSN 2249 6955**

[**UGC-not listed, Peer Reviewed;]**

- 32. Enumeration Technique for Solving Linear Fuzzy Set Covering Problem,
  International Journal of Pure and Applied Mathematics,85(4), pp:635-651(2013), **ISSN 1311-8080**

[**UGC listed; Indexed in- SCOPUS]**

- 33. Enumeration Technique for Solving Linear Fractional Fuzzy Set Covering Problem,
  International Journal of Pure and Applied Mathematics 84(5),pp:477-496(2013),
  ISSN 1311-8080,

[**UGC listed; Indexed in- SCOPUS]]**

- 34. Linearization technique for Solving Quadratic Fractional Set Covering, Partitioning and Packing Problems
  *Int. J. for Res. in Engineering & Social Science 2 (2), pp: 49-87**(2012)*** **ISSN 2249-2496**

[**UGC-not listed, Peer Reviewed;]**

- Set Covering, Set Partitioning and Set Packing Problems with Linear Fractional Objective Function,
  Lecture Notes in Management Sciences, Vol. 3, Proceedings of 3rd International Conference on Applied Operational Research, (August 2011), Istanbul, Turkey,107-119.
  ISSN 1235-7839

[UGC-not listed, Peer Reviewed; Conference presented]

- Enumeration Technique for Set Covering, Partitioning and Packing Problems with Quadratic Objective Function: A combinatorial Approach,
  Proceedings of 3rd National Conference on Mathematical Techniques: Emerging Paradigms for Electronics and IT Industries, January 30-31,(2010),TS-3.4.1-TS-3.4.6.

[UGC-not listed, Peer Reviewed; Conference presented]

Project-5: Ph.D. Project is completed under my supervision by Mr. Sanjiv Kumar on project title: "Matrix Games with Fuzzy payoffs"
Ph.D. degree awarded to him in 2018 by University of Delhi.
Following research articles were published by us:

- 35. A Fast Approach to Solve Matrix Games with Payoffs of Trapezoidal Fuzzy Nunbers
  Asia-Pacific Journal of Operational Research (APJOR),vol.33,no.06 **(2017)** open access **ISSN: 0217-5959**

[**UGC-listed; Indexed in-SCOPUS, SCIE]**

- An application of Matrix Games with Trapezoidal Intuitionstic Fuzzy Pay Offs to Transportation Problem
  *Lecture Notes in Management Science, Vol.(9), (Dec. 2017),*pp-57-65, **ISSN: 2008-0050, (**Presented in 9th International Conference ICAOR-2017 (Dec.18-20.2017), Chung Yuan Christian University, Taiwan)

[UGC-not listed, Peer Reviewed; Conference presented]

- *36.* Matrix Games with Triangular Intuitionistic Fuzzy Pay Offs,
  *The Journal of Fuzzy Mathematics 23 no.3 **(2017)** pp: 611-622* **ISSN:1066-8950**

[**UGC- listed, Peer Reviewed]**

- *37.* Method to Solve Fuzzy Game Matrix,
  *International Journal of Pure and Applied Mathematics 89 (5), **(2014)** pp:679-687* **ISSN 1311-8080**

[**UGC-listed; Indexed in-SCOPUS]**

Project-6: Ph.D. Project is completed under my supervision by Mr. Ashok Kumar in the field of Mathematical Programming. Successfully defended his Ph.D. thesis on 23rd August,2022 the title of the Thesis:
"Transportation and Transshipment Problems in Intuitionistic Fuzzy and Neutrosophic Environment"
Following research articles were published by us:

- 38. An efficient algorithm to solve transshipment problem in uncertain environment, *International Journal of Fuzzy Systems [*Springer International*] 22, **(2020)** pp:2613-2624,* **ISSN 15622479/21993211**
  (doi.org/10.1007/s40815-020-00923-9)

[**UGC-listed; Indexed in-SCOPUS]**

- 39. An efficient enumeration technique for a transportation problem in neutrosophic environment. *Neutrosophic Sets and System* 47, (2021) pp:354-365 **ISSN 2331608X** (*doi. 10.5281/zenodo.5775147*

[**UGC-listed; Indexed in-SCOPUS]**

- 40. An enumeration technique for transshipment problem in neutrosophic environment. *Neutrosophic Sets and System* 50, (2022) pp:552-563 **ISSN 2331608X** (*doi. 10.5281/zenodo.6774926*

[**UGC-listed; Indexed in-SCOPUS]**

Project-7: Ph.D. Project is under process in my supervision by Ms. Aparna in the field of Mathematical Programming since 2021.

Project-8: Ph.D. Project is under process under joint supervision of Prof. (Dr.) Pankaj Kumar Garg (Dept. of Mathematics, Rajdhani College, D.U. by Mr. Jitendra Singh in the field of Mathematical Programming since 2021.

Publications Profile

Published Research Papers 40+4 (published & conference proceeding),

Year of Pub	No of article	Year of Pub	No of article	Year of Pub	No of article
2025		2017	3+1(conf.)	2006	1
2024		2016	3+1(conf.)	2004	1
2023		2015	8	1999	1
2022	1	2014	5	1998	2
2021	1	2013	4	1997	1
2020	1	2012	2	1996	1
2019	1	2011	1+1(conf.)	1995	1
2018	1	2010	1+1(conf.)	**Total**	**44**

SCOPUS indexed-25; SCI/SCIE indexed-8 Peer Reviewed-11

YEAR-WISE DETAILS OF PUBLISHED RESEARCH PAPERS IN RESEARCH PROJECTS ABOVE

Presentation of Research papers in national/international conferences:

2020-21

- *Presented a research paper titled:-"An approach to solve transportation problem in uncertain environment"* **in an International conference TEQIP-III, on Recent Challenges and Opportunities in Engineering** organised by College of Technology and Engineering, Maharana Pratap University of Agriculture and Technology, Udaipur, India, by Mr. Ashok Kumar (my research student) 13-14 March, 2021

2019

- *Presented a research paper titled:-"An efficient algorithm to solve transshipment problem in uncertain environment"* **in 2nd International conference on Mathematical Modelling, Applied Analysis and Computation- (ICMMAAC-19**) organised by Department of Mathematics, Faculty of Science JECRC University, Jaipur (Raj.) India, by Mr. Ashok Kumar (my research student) 8-10 August, 2019

2017

- *Presented a research paper titled:- "An application of Matrix Games with Trapezoidal Intuitionstic Fuzzy Pay Offs to Transportation Problem*" in **9th International Conference ICAOR-2017**, 18th-20th Dec., **Chung Yuan Christian University, Taiwan** (published in Lecture notes)

2016

- *Presented a research paper titled:- A compromise method for solving fuzzy multiobjective fixed charge transportation problem* in **8th international conference ICAOR-2016**, 28th-30th June, at **Rotterdam, the Netherlands** (published in Lecture notes)

2011

- *Presented a research paper titled:- Set Covering, Set Partitioning and Set Packing Problems with Linear Fractional Objective Function* in **3rd International conference (ICAOR'-11)**, 24th -26th August, **Bahcehiser** University **Istanbul, Turkey**,. (published in Lecture notes)

2010

- *Presented a research paper titled:- "Enumeration Technique for Set Covering, Partitioning and Packing Problems with Quadratic Objective Function: A combinatorial Approach,"* in UGC sponsored **3rd National Conference** on Mathematical Techniques: Emerging Paradigms for Electronics and IT Industries **(MATEIT-2010), India**, 30-31 Jan.

2008

- *Convened a UGC sponsored **2nd National Conference** on Mathematical Techniques: Emerging Paradigms for Electronics and IT Industries **(MATEIT-2008), India**, 26– 28 Sept..*

2007

- *Presented a research paper titled :-"* Enumeration Technique for Set Covering, Partitioning and Packing Problems with Non-Linear Objective Function: A Combinatorial Approach*" in **2nd MPS International Conference** on Continuous Optimization **(ICCOPT-II 2007), McMaster University, Hamilton, Canada** . 13th-16th August.*

2006

- *Presented a research paper titled:-"* Enumeration Technique for set covering and set partitioning problem : A combinatorial approach*" in UGC sponsored **1st National Conference** on Mathematical Techniques: Emerging Paradigms for Electronics and IT Industries **(MATEIT-2006)**, India.*

2003

- *Presented a research paper titled:-"* Enumeration technique for set covering problems*" in **6th International Conference 'APORS' India**, December 8-10.*
- *Presented a research paper titled:-"* Enumeration technique for set covering problems: a combinatorial approach *" at **International conference SCRA-2003, University of Southern Maine, Port land U.S.A,** October 3-5.*

2001

- *Presented a research paper titled :-"* Quasi-convex set covering problem*" at the XXXIV Annual ORSI Convention and **International Conference on Operational Research and National Development, India, December.***

1998

- *Presented a research paper titled :-"* Trade-off relations in minmax problem with linear fractional objective function*" at the XXXI Annual ORSI Convention and **International Conference on Operations Research and Industry, India,** December*

1997

- *Presented a research paper titled:-"*Multi-objective fractional fixed charge problem*" at the XXX Annual & **International Convention and ORSI Conference, India,** December.*

Research Projects (Major Grants/Research Collaboration)

- *Completed an innovation project in the year 2013-14 awarded by University of Delhi, entitled "Dynamical Study of Weather of Delhi Region" Completed in March-2015, India Grant- Rs. 4,00,000*
- *Completed a Minor Research Project in the year 2011 awarded by UGC, entitled "Integer Fuzzy Programming and completed in June- 2014, India Grant- Rs. 1,50,000*

Awards and Distinctions

- *B.Sc. (H) Mathematics: Secured 1st rank in the College for the University Examination and received S.C. Malik award for the same.*
- *M.Sc. Mathematics from Hans Raj College secured 2nd rank in the college for the University Examination.*
- *Secured distinction in M.Phil. Examinations at University of Delhi*

Association With Professional Bodies

Memberships

- *Operational Research Society of India (ORSI), INDIA: Senior Member*
- *Soft Computing Research Society, India: Life Member*
- *"Mathematical Reviews", American Mathematical Society: Reviewer*

Participation in Workshops/Seminars/Conferences

2016

- *Chaired a session in the International Conference ROATA-2016 (Dept. of Operations Research, University of Delhi)*

2015

- *Jury for DST sponsored program "INSPIRE" 2015.*
- ***Resource Person** and the mentor for DST sponsored "INSPIRE SCIENCE INTERNSHIP CAMP" at OM Institute of Technology & Management, Hisar in October.*

2014

- *associate member to a project of National Mission on Education (a body under MHRD) undertaken by CBSE-CAER for curriculum development.*
- *Jury for DST sponsored program "INSPIRE" 2014.*
- *Co-Chaired one of the sessions of international Conference" The Asiastic Society,Indology and Indologist during late 18th and 19th centuries*

2013

- ***Resource Person** and the mentor for DST sponsored "INSPIRE SCIENCE INTERNSHIP CAMP" in 2013 held in KIIT Gurgoan.*
- *Jury for DST sponsored program "INSPIRE" 2013.*

2012

- *Jury for DST sponsored program "INSPIRE" 2012.*
- *Chaired a session* in the international Conference OPTIMA-2012 (Dept. of Operations Research, University of Delhi)

2011

- *Convened & a Resource Person for a five day national work-shop NUMDECS 2011, sponsored by UGC, from February 1-5th, 2011.*
- ***Resource Person** and mentored a DST sponsored "INSPIRE SCIENCE INTERNSHIP CAMP" in 2011 held in Grehwal University*
- *Jury for DST sponsored program "INSPIRE" 2011.*

2010

- *Convened 3rd National Conference sponsored by UGC, Govt. of India, on Mathematical Techniques: Emerging Paradigms for Electronics and IT Industries (MATEIT-2010), Delhi, India, January*
- *Participated in ICT workshop for Capacity Building of Delhi University Faculty, ILLL Workshop: 3-2-10 to 26-2-10*

2009

- *Convened a National Work-shop Q~CISM-2009, sponsored by CSIR, Govt. of India, on quality management and security, at D.D.U. College, Delhi, India*

2008

- ***Resource person** for a Workshop on "Optimization Techniques and its Applications", in Banasthali Vidya-Peeth, December, 8th—13th , sponsored by DST, Govt. of India, India*
- *Convened 2nd National Conference sponsored by UGC, Govt. of India, on Mathematical Techniques: Emerging Paradigms for Electronics and IT Industries (MATEIT-2008), DDUC, Delhi, India*
- *Participated in the Pre-ICM International Convention on Mathematical Sciences, held at University of Delhi, December, India.*

2007

- *Convened a workshop on "Quantum Mechanics" sponsored by NASI, India*

2006

- *Convened 1st National Conference sponsored by UGC, Govt. of India, on Mathematical Techniques: Emerging Paradigms for Electronics and IT Industries (MATEIT-2006), DDUC, Delhi, India,*
- *Participated in 2nd International Conference on Current Developments in Atomic, Molecular & Optical Physics with Applications-CDAMOP, March 21-23, India.*
- *Participated in Disaster Management & Self Defense Course conducted by Directorate General of Home Guards & Civil Defense and University of Delhi, Jan. 30-Feb.3, India.*

2001

- *Participated in a 3-week professional Development Program (Refresher Course in Mathematics) conducted by Academic Staff College, Jamia Millia Islamia Sept 3-Sept.22, India*
- *Participated in a 54th , 4-week Orientation Programme conducted by UGC and ASC, Jamia Millia Islamia, New Delhi, June 11- July 7, India*

1998

- *Participated in a 3-week professional Development Program (Refresher Course in Mathematics: Applied Mathematics) conducted by CPDHE, University of Delhi, Jan 14-Feb 3, India*
- *Participated in a 3-week professional Development Program (Refresher Course in Mathematics) conducted by CPDHE, University of Delhi, April 30-May 19, India*

1997

- *Participated in a 3-week professional Development Program (Refresher Course in Statistics) conducted by CPDHE, University of Delhi, March 27-April 17, India*

Short resume:

Dr. Ratnesh Rajan Saxena is a Professor in the Department of Mathematics, Deen Dayal Upadhyaya College, University of Delhi. He has a teaching experience of more than 30 years. He has about 44 research papers to his credit in the relevant field of mathematical Programming published in esteemed journals and/or presented in national or international conferences. He has visited and presented his research work at various national and international conferences held in India and abroad like U.S.A., Canada, Turkey, Netherlands and Taiwan. He has authored two books on Mathematics and edited various conference proceedings. He has been the Visiting Faculty/Counsellor and resource person for applied mathematics to various reputed academic institute like School of Computer & System Sciences-Jawaharlal Nehru University, Department of Mathematics, University of Delhi, India, Indira Gandhi National Open University, India and many other. He has organized various academic ventures in the year 2006-2012, including three UGC sponsored National Conferences and three National Work-Shops sponsored by NASI and CSIR in India. He is the research supervisor to students of M.Phil. and Ph.D. program since 2008 in Mathematical Programming at Dept. of Mathematics, University of Delhi, and till 2020 has produced independently 6 PhD's and 4 MPhil's and still busy in research with students. He is the life member of various academic societies like Operational Research Society of India (ORSI), Soft Computing Research Society, India, He is also reviewer of "Mathematical Reviews", American Mathematical Society and other relevant journals.

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