CURRICULUM- VITAE

1.   Name   **Dr. DEEPA SINHA**

2.   Sex   **FEMALE**

3.   Nationality   **INDIAN**

4.   (a) Present official address with designation and email address

Dr. Deepa Sinha (mo. No. 08744022273)   Professor

   Department of Mathematics

   South Asian University

   RAJPUR ROAD, MAIDAN GARHI

   NEWDELHI, 110068 (India)
   Cell No: 08744022273

   E-mail :**deepasinha2001@gmail.com**

   deepasinha@sau.ac.in

(b) Permanent address   **D/o Late Sri M.C. Sinha**

H. No. 179

Tiwaripur-1

Kanpur-208010

5. Highest Degree (Ph.D./M.E./M.Phil./M.Sc./B.E./etc.):_____**Ph. D (Discrete Math.)**
   Faculty of Technology,
   University of Delhi, Delhi.

6. Teaching and Research Experience (In no. of years):_____ **26 years approximately**
   (Approx. 22 years of teaching and three and half years of research)

7. Number of Research Papers in journals: **more than 110**

8. Number of Books Authored: **01**

9. **Number of Books Edited:**   **02**

10. Number of Research Papers in Conference Proceedings: **15**
11. **Number of Invited Talks Delivered**   **approx. 200**

12. Number of sessions chaired in the conference: **above 50**

13. Designation of the post now being held   **Professor**

   Department of Mathematics,

   South Asian University

   RAJPUR ROAD, MAIDAN GARHI

   NEWDELHI, 110068 (India)
   Cell No: 08744022273

14.   Education (starting with High School/Higher Secondary), list all examinations passed, degrees obtained (specify disciplines), division, if any, dates and institutions/ universities from which obtained.

A.

Examination passed	Year	Name & Address of School/ College/ Institution	Board/ University
AISSE	1985	St. Joseph Sr. Sec. School, Kanpur-10	C.B.S.E.
AISSCE	1987	St. Joseph Sr. Sec. School, Kanpur-10	C.B.S.E.
B.Sc. (PCM)	1990	P.P.N. Degree College, Kanpur	Kanpur University
M.Sc.(Math.)	1994	I.I.T. Kanpur	I. I. T. Kanpur
Ph.D.[*]	2007	Delhi College of Engineering, Bawana road, Delhi-42	Delhi University (Faculty of Technology)

[*] Title: "New Frontiers In The Theory Of Signed Graphs" **(submitted in July 2005)**

B.   Have qualified CSIR-**UGC NET** twice for eligibility for <u>**lectureship**</u> held on **20/6/1999**&**19/12/1999.**

C.   Received **MHRD Scholarship** to pursue the research work for the tenure **Dec. 2000 – Dec. 2004.**

D. Joined Ph.D**.** on **12 Dec. 2000**, **in Delhi college of Engineering** affiliated to   **University of Delhi** (Faculty of Technology) under the supervision of **Prof. Dr. (Mrs) MuktiAcharya** under **MHRD**   scholarship. The topic of my Thesis is *New Frontiers in theTheory of Signed Graphs*.   **(Submitted in July- 2005).**

15. Professional career up-to-date in chronological order:

Period	Designation,	Full Name & address of the employer
1 August, 2018	Professor	South Asian University
1 August, 2015 till July 2018	Associate Professor (Senior Grade)	South Asian University, Delhi-21
1 August, 2012 to July, 2015	Associate Professor, Teaching	South Asian University, Delhi-21
15 July, 2012 to 31 July, 2012	Associate Professor, Teaching	Delhi Technological University, Delhi-42

offered professorship from 1 August, 2012	Offered Professorship, Teaching	Banasthali Vidyapith,
1 July, 2010 to15 July, 2012	Associate Professor, Teaching	Banasthali Vidyapith,
1 Aug., 2007 to 1 July, 2010	Associate Professor, Teaching	Banasthali Vidyapith,
10 Sep., 2006 to 31 July, 2007	Sr. Lecturer, Teaching	Banasthali Vidyapith
4^{rth} July, 2004 to 9th Sep. 2006	Lecturer, Teaching	Banasthali Vidyapith
(1) 1st Jan. 2001 to May, 2001 (2) 1st Aug. 2001 to Dec., 2001 (3) 1st Jan. 2002 to May, 2002	Part-time lecturer, Teaching	Mahila Institute of Technology, Kashmere gate, New Delhi
(1) 1st Aug. 2000 to Dec., 2000. (2) 1st Jan. 2001 to May 2001.	Part-time lecturer, Teaching	Guru PremSukh Memorial College of Engg., Delhi-110085
1st Sep., 1999 to 7^{nth} Dec., 2000	Contractual-Lecturer, Teaching	Delhi College of Engineering, Bawana Road, Delhi-42
1st July, 1996 to 31st August, 1999	Lecturer, Teaching	Khalsa Girls Degree College, Harjinder Nagar, Kanpur-7

16.   Publications with titles of articles, names of journals and dates (a) research, (b) others   See **Annexure-1A**

   Publications of Books/ Book Chapters/ books edited   **See Annexure-1B**

17. Workshops, seminars and conferences attended/ presented paper/ delivered Invited talk/ Chaired the session (August 2012-till date)

See. **Annexure-2**

18.   **Papers presented (2001-July 2012)**   See   **Annexure-3**

19.   **Invited talks delivered- (2010-July 2012)**   See   **Annexure-4**

20.   **07 students are awarded their M. Phil. Degree under my supervision.**   See   **Annexure-5**

21. 16 students got awarded their Ph.D. and three Students are working as research scholars for Ph.D.   See   **Annexure-6**

22.   List of courses taught in UG/PG level: See   **Annexure-7**

23. Have refereed several research papers for National and international Journal of high impact factor like Discrete Applied Mathematics, Graphs and Combinatorics, International Journal of Physical Sciences etc., National Academy of Science Letters, Discussiones Mathematicae Graph Theory, <u>Proceedings of the National Academy of Sciences</u>, India, SpringerPlus, AKCE International Journal of Graphs and Combinatorics.

24. Membership of following Society:
   a. Academy of Discrete Mathematics and Applications
   b. Ramanujan Mathematical Society
   c. Indian Mathematical Society
   d. Fourm for Interdisciplinary Mathematics (FIM)
   e. SOFT COMPUTING RESEARCH SOCIETY
   f. Indian Academy of Mathematical Modeling and Simulation(IAMMS)

25. Awards/Honours/Special Recognition

1. *Sinha Deepa, **Member**, Board of Studies, School of Basic and Applied Sciences, K.R Mangalam University Gurgaon, India, 2019.*

2. *Sinha Deepa, **Member**, Advisory Group of Department of Mathematics and Scientific Computing, Madan Mohan Malviya University of Technology, Gorakhpur, India, 2020.*

3. *Sinha Deepa, **Fellow**, India Society for Mathematical Modeling and Computer Simulation (ISMMACS), August 30, 2022.*

4. *Sinha, Deepa, **Members of Executive Committee**, India Society for Mathematical Modeling and Computer Simulation (ISMMACS), 2022-2023.*

5. *Sinha Deepa, **Members of Executive Committee, ACADEMY OF DISCRETE MATHEMATICS AND APPLICATIONS 2022-2024***

6. *Sinha, Deepa, **Joint Secretary**, of Indian Academy of Mathematical Modeling and Simulation (IAMMS) 2019-2021*

7. *Sinha, Deepa, **Vice President,** Forum for Interdisciplinary Mathematics (FIM) 2021-2022*

8. *Sinha Deepa, **Associate Editor-** MATHEMATICA MORAVICA, Published by Facult of Technical Sciences Čačak, University of Kragujevac, Department of Mathematics, Svetog Save 65, 32000 Čačak, Serbia.*

9. *Sinha Deepa, **Associate Editor-**Journal of Combinatorics, Information & System, Sciences (JCISS), A Quarterly International Scientific Journal, JCI SS is a Publicationof "Forum for Interdisciplinary Mathematics (FIM)"Sciences (JCISS), A Quarterly International Scientific Journal, JCI SS is a Publication of "Forum for Interdisciplinary Mathematics (FIM)".*

26. Participation of activities in South Asian University:

(a) *University Administration:*

1. **Associate Dean Students**, *January 7, 2019- July 2020*
2. **Dean of Students,** *August 1, 2020- March 13, 2022*
3. **Member of the Grievance Committee,** *August 2012 -October 2022.*
4. **Chairperson Gender Sensitization Committee,** *May 2018 -October 2022*
5. **Member Gender Sensitization Committee,** *August 2012- October 2022.*
6. **Chairperson of the Department** *(May 2016 to May 2018)*
7. **Faculty Consultative committee 2014-2016, 2018-2019**
8. **Academic council of SAU** *(2015-2017), 2020 onwards.*
9. **Faculty Advisor**: *Society for Music and dance*
10. **Faculty Advisory Committee** *(to deal with student led ad-hoc events/talks)*
11. **Scholarship Committee** *(2012- May 20, 2021)*
12. *Scholarship Committee (2012 till date)*
13. **Chairperson Scholarship Committee (December 7, 2020 – May 20, 2021)**
14. **Dean, Faculty of Mathematics & Computer Science** *(March 2022 and onward)*
15. **Chairperson of the Department** *(May 11, 2022 till date)*
16. *Member of Committee to formulate rules and regulations for PhD Submission in the Department (10 August, 2016)*
17. *Member of Purchase committee ceiling Fans of the hostel SAU.*
18. *University representative to SAU entrance Examination to Srilanka 2013, Chennai (2014), Patna (2018) and Delhi (2017)*

(b) *Residential life of students:*

Recommended students for research in various reputed Universities in SAARC countries and outside countries like Liverpool Hope University, Liverpool, UK; The University of Texas at   Dallas, University of Malta.

(c) *Extra-curricular activities of students:*

1. *Judge to student's singing and Dance competition in Students fest in SAU 2015-2016.*
2. *Organized a* **cultural programme** *in the International Conference of Current Trends in Graph Theory and Computation 2016.*

27. Organization of Recent academic events like conferences, workshops and symposia:

International Conference on Recent Developments in Theory and Computation & Application of Differential Equations (ICRDTCADE-2019)**(Coordinator)**	Department of Mathematics, South Asian University, New Delhi 110021 (India)	January 21-23, 2019.
2nd International Conference on Advances in Computational Mathematics (**Convener**)	Tribhuvan University Kathmandu, Nepal	December 23-24, 2018
International Conference on Mathematical Modelling and Simulations**(Coordinator)**	Department of Mathematics, South Asian University, New Delhi 110021 (India)	December 1-3, 2018.
International Conference on Current Trends in Graph Theory and Computation **(General Chair)**	Department of Mathematics, South Asian University, New Delhi 110021 (India)	September 17-19, 2016.
Member of organising committees of all conferences/ symposiums/ workshops organised by Department of Mathematics at South Asian University.		

28. Organization of SAARC Charter Day Event, 2018.

29 Awards/Honours/Special Recognition**.**
  Other contribution:

- **Examiner To M.Tech. Thesis and Viva- voce** of M.Tech / M.Sc Students at IIT Delhi several times
- **Assistant Editor** of *Journal of Combinatorics, Information & System Sciences* (JCISS) upto 2019
- **Editor,** Proceedings of International Conference of Current trends in Graph theory and Computation, Elsevier Publisher, Vol-63, 2017.
- **Edited, Special Issue of**:
  Journal of AKCE International Journal of graphs and Combinatorics (Elsevier publications), volume 15, Issue 1, 2018.

- **PhD Thesis Examined:**

- Examied PhD thesis of Mr. Pradeep Singh, On Zero Divisor Graphs of Rings and its Toplogical Indices, Shri Mata Vaishno Devi University, India.
- Examined PhD Thesis of Mr Rizwan Ul Shaban, On Laplacian Spectra of Graphs, from University of Kashmir, India
- Examined PhD Thesis of Mr Mohmad Imran Bhat, On rings and Graphs associated to their structures, from University of Kashmir, India
- Examined PhD of Ms Pallav Jain, On Some Graph Layout Problems and Solution Strategies, Dayalbagh Educational Institute, Agra
- Examined Ph.D. thesis of Mr Vikash Tripathi, Pairing the vertices of the Dominating Sets in Graphs: Algorithmic and Hardness Results, from Indian Institute of Technology Ropar, Punjab, India
- Examined Ph.D. thesis of **Ms. Savita Anjana,** IMAGE AND AUDIO ENCRYPTION USING CHAOTIC MAPS AND MATHEMATICAL TRANSFORMS, NorthCap University, **Gurugram, India.**
- Examined Ph.D. thesis of Ms Saumya Y M, A STUDY ON GRAPH LABELINGS AND GRAPH SPECTRA, from NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, Karnataka.
- Examined Ph.D. thesis of Mr. Ashoka K, Study on Spectra of Graphs, from Karnataka University, Karnataka.
- Examined Ph.D. thesis of Mr. MALLIKARJUN GHALEPPA, MAGIC LABELING OF GRAPHS, from Bharthiar University, Tamilnadu.
- Examined Ph.D. thesis of Ms Monimala Nej, "**Exponents of Primitive Companion Matrices**" from Shivnadar University, Uttar Pradesh, India
- Examined Ph.D. thesis of Ms Shanu Goyal, "Study of Various Graph Operators" from Banasthali University, India.
- Examined Ph.D. Thesis of Mr Sunilkumar R, "Studies of Betweenness Centrality of Graphs" from Cochin University of Science and Technology, India
- Examined Ph.D. thesis of Y.Kins, "On The Radio Number of Certain Graphs" from Madras University, India.
- Examined Ph.D. thesis of Sonia K Thomas, "Conditional Resolvability in certain Interconnection Network" from Madras University, India.
- Examined Ph.D. thesis of Prashant Kushwah, "Some issues in identity based signcryption" from BR Ambedhkar University, Agra, India.
- Examined Ph.D. thesis of Neha Sehgal, "THE DRIVER OF OIL PRICES – A DATA MINING APPROACH" from University of Petroleum & Energy Studies, Dehradun, India.
- Examined Ph.D. thesis of Mr. B. S. Durgi, "Spectra of Graphs" from Visvesvaraya Technological University, Belgaum – 590018, India.
- Examined Ph.D. thesis of Ms. Manjula Gudgeri, "On Domination Number of Graphs" from Visvesvaraya Technological University, Belgaum – 590018, India.
- Examined Ph.D. thesis of Ms. Rajashree Mishra, "Chemo-inspired Genetic Algorithm for Function Optimization and its Real-life Applications" from KIIT University, Bhubaneswar, India.
- Examined Ph.D. thesis of Sanjay Dutta, "Genetic Algorithm Approach for Solving Multi-Objective Fuzzy Stochastic Programming Problem and Its Applications" from KIIT University, Bhubaneswar, India.

List of enclosures: **(1) Annexure-1 A** and **Annexure 1B**

(2) Annexure-2

(3) Annexure–3

(4) Annexure–4

(5) Annexure-5

(6) Annexure-6

(7) Annexure-7

Date: 20/ February/2023

(Name: Deepa Sinha)
Professor
Department of Mathematics
South Asian University
 New Delhi-110068

Annexure 1A

	Authors	Title of article	Journal	Volume/pages/year	Index/Impact factor
105	Bableen Kaur and **Deepa Sinha**	Properties of derived signed graphs on Beck's zero-divisor graph	Discrete Mathematics Algorithms and Applications	DOI: [10.1142/S179383092250135X](#) September 2022 **(World Scientific)**	**Emerging Science Citation Index,** SCOPUS, Zentralblatt Math, DBLP Google Scholar, Mathematical Reviews® / MathSciNet®
104	Obaidullah Wardak, Ayushi Dhama, **Deepa Sinha**	On Some Properties of Addition Signed Cayley Graph Σn	Mathematics	10(19), 3492, **2022** DOI: [10.3390/math10193492](#) **(MDPI)**	**Science Citation Index Expanded,** SCOPUS **(Impact factor 2.592)**
103	**Deepa Sinha,** Obaidullah Wardak and Ayushi Dhama	On Some Properties of Signed Cayley Graph Sn	Mathematics	10(15), 2633, **2022** DOI: [10.3390/math10152633](#) **(MDPI)**	**Science Citation Index Expanded,** SCOPUS **(Impact factor 2.592)**
102	Anshu Sethi**,** **Deepa Sinha,** Obaidullah Wardak	Algorithmic Approach to Find S -Consistency in Common-Edge Signed Graph	MethodsX	9, 101783, **2022** DOI: [10.1016/j.mex.2022.101783](#) **(Elsevier)**	**Emerging Science Citation Index,** Scopus, PubMed Central
101	Neha Kansal, Bableen Kaur, Pravin Garg and **Deepa Sinha**	On another class of strongly perfect graphs	Mathematics	DOI: [10.3390/math10122014.](#) **(MDPI)**	**Science Citation Index Expanded,** SCOPUS **(Impact factor 2.592)**
100	**Deepa Sinha** Bableen Kaur and T Zaslavsky	The characteristic polynomial of a graph containing loops	Discrete Applied Mathematics	300, 97-106, **2021** DOI: [10.1016/j.dam.2021.04.025](#) **(Elsevier)**	**Science Citation Index,** SCOPUS, Zentralblatt Math, Google Scholar, Mathematical Reviews, **(Impact factor 1.254)**

99	**Deepa Sinha** and Bableen Kaur	Some aspects of zero-divisor graphs for the ring of Gaussian integers modulo 2^n	Journal of Applied Mathematics and Computing	**68**, 69–8, 2022 DOI: 10.1007/s12190-021-01518-9 **(Springer)**	**Science Citation Index Expanded,** SCOPUS, Zentralblatt Math, Google Scholar, Mathematical Reviews, **(Impact factor 2.196)**
98	**Deepa Sinha**, Anita Kumari Rao and Bijan Davvaz	On Some Properties of Co-maximal Graphs of Commutative Rings	National Academy of Science Letters	**44**, 437–442, **2021** DOI: 10.1007/s40009-020-01030-x **(Springer)**	**Science Citation Index Expanded,** SCOPUS, Zentralblatt Math, Google Scholar, Mathematical Reviews, **(Impact factor 0.649)**
97	**Deepa Sinha** and Deepakshi Sharma	Characterization of 2-Path Signed Network	Complexity	2020, Article ID 1028941, 13 pages, **2020** DOI: 10.1155/2020/1028941	**Science Citation Index** Expanded, MathSciNet, Google Scholar, Scopus, DBLP Computer Science Bibliography **(Impact factor 2.121)**
96	**Deepa Sinha** and Anita Kumari Rao	Co-maximal Graph, its Planarity and Domination Number	Journal of Interconnection Networks	**20(2), 2020** DOI: 10.1142/S021926592050005X	**Emerging Science Citation Index,** Scopus, DBLP Library
95	**Deepa Sinha** and Anita Kumari Rao	Embedding of sign-regular signed graphs and its spectral analysis	Linear Algebra and Multilinear Algebra	70(8), 1496-1512, **2020** DOI: 10.1080/03081087.2020.1765954 **(Taylor & Francis)**	**Science Citation Index** Expanded, MathSciNet, Google Scholar, Scopus, zbMath **(Impact factor .964)**
94	**Deepa Sinha** and Bableen Kaur	On Beck's zero-divisor graph	Notes on Number Theory and Discrete Mathematics	DOI: 10.7546/nntdm.2019.25.4.150-157 **25(4),150-157, 2019**	**Emerging Science Citation Index,** Electronic Journals Library, Index Copernicus International, ROAD – Directory of Open Access

					Scholarly Resources, WorldCat
93	**Deepa Sinha** and Bableen Kaur	Beck's Zero-Divisor Graph in the Realm of Signed Graph	National Academy of Science Letters	DOI: 10.1007/s40009-019-00836-8 **43**, 263–269, **2020** **(Springer)**	**Science Citation Index Expanded,** SCOPUS, Zentralblatt Math, Google Scholar, Mathematical Reviews, **(Impact factor 0.519)**
92	**Deepa Sinha** and Deepakshi Sharma	Square signed graph	National Academy of Science Letters	**DOI:** 10.1007/s40009-018-0781-4 **42**, 513–518, **2019** **(Springer)**	**Science Citation Index Expanded,** SCOPUS, Zentralblatt Math, Google Scholar, Mathematical Reviews, **(Impact factor 0.519)**
91	**Deepa Sinha** and Anita Kumari Rao	Embedding of signed regular graphs	Notes on Number Theory and Discrete Mathematics	DOI: 10.7546/nntdm.2018.24.3.131-141 24(3, 131-141, 2018	**Emerging Science Citation Index,** Electronic Journals Library, Index Copernicus International, ROAD – Directory of Open Access Scholarly Resources, WorldCat
90	**Deepa Sinha** and Pravin Gar	Some Results on Tensor Product of a Graph and an odd cycle.	National Academy of Science Letters, Natl. Acad. Sci. Lett	**41**, 243–247, **2018** **(Springer)**	**Science Citation Index Expanded,** SCOPUS, Zentralblatt Math, Google Scholar, Mathematical Reviews, **(Impact factor 0.519)**
89	**Deepa Sinha** and Deepakshi Sharma	On the properties of square signed graph	National Academy of Science Letters, Natl. Acad. Sci. Lett.	**41**, 233–238, **2018** **(Springer)**	**Science Citation Index Expanded**, SCOPUS, Zentralblatt Math, Google Scholar, Mathematical Reviews, **(Impact factor 0.519)**

88	**Deepa Sinha**, Anita Kumari Rao and Ayushi Dhama	**S**pectral analysis of t-path signed graphs	Linear Algebra and Multilinear Algebra	67:9, 1879c1897, DOI: 10.1080/03081087.2018.1472737, May 2018 **(Taylor & Francis)**	**Science Citation Index** Expanded, MathSciNet, Google Scholar, Scopus, zbMath **(Impact factor 0.835)**
87	**Deepa Sinha** and Anita Kumari Rao	Co-Maximal signed graphs of commutative rings	TURKISH JOURNAL OF MATHEMATICS	42(3), DOI: 10.3906/mat-1704-20 (May 2018).	**Science Citation Index Expanded**, MathSciNet, Scopus, zbMath **(Impact factor 0.614)**
86	**Deepa Sinha**, Anita Kumari Rao	A note on co-maximal graphs of commutative rings	AKCE International Journal of Graphs and Combinatorics	15(1), DOI: 10.1016/j.akcej.2018.03.003 (April 2018) **(Elsevier)**	**Emerging Source Science Citation Index**, MathSciNet, Scopus, zbMath, AMS Mathematical Reviews
85	**Deepa Sinha** and Deepakshi Sharma	Characterization of 2-Path Product Signed Graphs with Its Properties	Computational Intelligence and Neuroscience	DOI: 10.1155/2017/1235715, July 2017	**Science Citation Index Expanded**, DBLP Computer Science Bibliography, Scopus, Google Scholar, **(Impact factor 1.649)**
84	**Deepa Sinha** and Deepakshi Sharma	Iterated local transitivity model for signed social networks	Applicable Algebra in Engineering Communication and Computing	DOI: 10.1007/s00200-017-0333-z, July 2017 **(Springer)**	**Science Citation Index Expanded**, DBLP Computer Science Bibliography Scopus, Google Scholar , Mathematical Reviews **(Impact factor 0.464)**
83	**Deepa Sinha** and Ayushi Dhama	Negation switching invariant 3-Path signed graphs	Journal of Discrete Mathematical Sciences and Cryptography	DOI: 10.1080/09720529.2016.1187959, 20(3):703-716, April 2017 **(Taylor & Francis)**	**Emerging Science Citation Index**, Scopus, Google Scholar , MathSciNet, ZbMath,

82	**Deepa Sinha** and Jaspreet Kaur	Edge Friendly Labellings of Graph-I	Ars Combinatoria	129 (2016), 139-156.	**Science Citation Index Expanded**, Scopus, MathSciNet, zbMATH **(Impact Factor 0.268)**
81	**Deepa Sinha** and Deepakshi Sharma	Structural properties of Absorption Cayley graphs	Appl. Math. Inf. Sci.	10(6), 2237-2245, March 2017 http://dx.doi.org/10.18576/amis/100626	Scopus
80	**Deepa Sinha**, Preeti Jain, P. G. Siddheshwar, N. S. Tomer	Boundary layer flow and thermal analysis of a Cu-nanoliquid past a stretching cylinder	International Journal of Applied and Computational Mathematics	DOI: 10.1007/s40819-016-0255-7, 2016 **(Springer)**	Zentralblatt Math, Google Scholar, Mathematical Reviews,
79	**Deepa Sinha** and Deepakshi Sharma	On Square and 2-path Signed Graph	Journal of Interconnection Networks	16(1) (2016) 1550011 (19 pages), DOI: 10.1142/S0219265915500115.	Scopus, DBLP Library
78	**Deepa Sinha** and Jaspreet Kaur	Region indices of Edge-friendly labeling of a plane graph	Utilitas Mathematica	99 (2016), 187-213.	**Science Citation Index Expanded**, Scopus, MathSciNet, zbMATH **(Impact factor 0.261)**
77	**Deepa Sinha** and Jaspreet Kaur	Edge friendly labelings of the graph-II	Utilitas Mathematica	99(2016), 251-27.	**Science Citation Index Expanded**, Scopus, MathSciNet, zbMATH **(Impact factor 0.261)**
76	**Deepa Sinha** and Jaspreet Kaur	Edge friendly labelings of the graph-I	ARS Combinatoria	129(2016), 139-156,	**Science Citation Index Expanded**, Scopus, MathSciNet, zbMATH

				(Impact factor 0.268)
75	**D. Sinha** and A. Sethi	Encryption using Network and Matrices through signed graphs,	International Journal of Computer Application	2016	
74	**Deepa Sinha**, Preeti Jain, Pradeep Siddheshwar, Nagendra Tomer	Forced Convective Flow of a Nanoliquid due to a Stretching Cylinder with Free Stream	Journal of Applied Fluid Mechanics	Vol. 9, No. 1, pp. 463-474, 2016	**Science Citation Index Expanded**, Scopus. **(Impact factor 0.9)**
73	**Deepa Sinha** and Mukti Acharya	Characterization of Signed Graphs Whose Iterated Signed Line Graphs are Balanced or S-Consistent,	Bull. Malays. Math. Sci. Soc.	Vol. 39, 2016, 297-306 **(Springer)**	**Science Citation Index Expanded** (SciSearch), SCOPUS, Zentralblatt Math, Google Scholar. **(Impact factor 0.840)**
72	**Deepa Sinha** and Anshu Sethi	An Algorithm to detect balancing of iterated line sigraph	SpringerPlus	(2015) 4:704 DOI 10.1186/s40064-015-1499-0	Scopus and PubMed Central **(Impact factor 0.90 in 2016)**
71	Pravin Garg, **Deepa Sinha**, Shanu Goyal	EULERIAN AND HAMILTONIAN PROPERTIES OF GALLAI AND ANTI-GALLAI TOTAL GRAPHS	J. Indones. Math. Soc.	Vol. 21, No. 2 (2015), pp. 105–116.	**Zentralblatt Math, Google Scholar, MathSciNet**
70	**D. Sinha** and A. Sethi	An Algorithmic Characterization of sigraphs whose common-edge	Journal of Discrete Mathematical Sciences & Cryptography	18(5) 2015, 581-603. **(Taylor & Francis)**	**Emerging Science Citation Index**, Scopus, Google Scholar , MathSciNet, ZbMath,

		sigraphs and second iterated line sigraphs are switching equivalent			
69	**Deepa Sinha** and Ayushi Dhama	Unitary Addition Cayley Ring Signed Graphs	Journal of Discrete Mathematical Sciences & Cryptography	18(5) 2015, 559-579. **(Taylor & Francis)**	**Emerging Science Citation Index**, Scopus, Google Scholar , MathSciNet, ZbMath,
68	**D. Sinha** and Pravin Garg	Canonical Consistency of Semi-Total Line Signed Graphs	Natl. Acad. Sci. Lett.	38(5), 429-432 (2015), DOI :10.1007/s40009-015-0373-5, 2015. **(Springer)**	**Science Citation Index Expanded**, SCOPUS, Zentralblatt Math, Google Scholar, Mathematical Reviews, **(Impact factor 0.345)**
67	**Deepa Sinha** and Pravin Garg	Canonical Consistency of Semi-Total Point Signed Graphs	National Academy of Science Letters	<u>38(6)</u> 2015, DOI 10.1007/s40009-015-0374-4. **(Springer)**	**Science Citation Index Expanded**, SCOPUS, Zentralblatt Math, Google Scholar, Mathematical Reviews, **(Impact factor 0.345)**
66	D. Sinha and A. Dhama	On Dot Line Signed Graphs L.(S)	Discussiones Mathematicae Graph Theory	35(2015)215 227,doi:10.7151/dmgt.1793	
65	Kharbanda P., Agarwal D. and **Sinha D**.	Nondifferentiable multiobjective pro-gramming under generalized functions	International Journal of Operations Research	23(3)2015 https://doi.org/10.1504/IJOR.2015.069627	
64	**D. Sinha** and A. Dhama	Negation switching invariant signed graphs	Electronic Journal of Graph Theory and Applications	2 (1) (2014), 32–41	
63	**D. Sinha** and A. Dhama	Canonical sign-compatibility of semi-total and total signed graphs	Calcutta Mathematical Society	106(1) 2014, 55-64	
62	**D. Sinha** and P. Garg	Balance and Antibalance of Tensor Product	Thai Journal of Mathematics	12(2)(2014), 303-311	

		of two signed graphs			
61	**Deepa Sinha,** Preeti Jain, N.S. Tomer	Computer-Assisted Power Series Solution for MHD Boundary Layer Flow of a Weakly Electrically Conducting Nanoliquid past a Stretching Sheet	Open Journal of Heat, Mass and Momentum Transfer	2(2)2014, 47-57.	
60	Kharbanda P., Agarwal D. and Sinha D.	Non-smooth multiobjective programming problem involving $(dI - \rho - \sigma)$-V-type I functions	International Journal of Operations Research	21(1), 2014. DOI: 10.1504/IJOR.2014.064019	
59	Trilok Mathur, Ruchi Mathur and Deepa Sinha	Applications of Feket-Szeg¨o Inequalities for Generalized Sakaguchi Type Functions to Fractional Derivative Operator	MATEMATIKA, 2014.	Volume 30, Number 1, 89–96.	
58	Jain R. and Sinha D	Stability and regions of motion in the restricted-three-body problem when both the primaries are finite straight segments	Astrophysics and Space Science	351(1), 87-100 (2014)	
57	Jain R. and Sinha D	Non-linear stability of 4 L in the restricted three-body	Invertis Journal of science & Technology	7(4), 215-234, ISSN No.-0973-8940, (2014)	

		problem when the smaller primary is a finite straight segment under resonances			
56	Jain R. and Sinha D	Non-linear stability of 4 L in the restricted problem when the primaries are finite straight segments under resonances	Astrophysics and Space Science	353(1), 77-88 (2014)	
55	Kumar A., P. Singh, N.S. Tomer and D. Sinha	Study the impact of soret and sher-wood number on stretching sheet using homotopy analysis method.	International Journal of Emerging Technology and Advanced Engineering	vol. 4(1), 629-635, 2014.	
54	Singh P., A. Kumar, N.S. Tomer and D. Sinha	Analysis of Porosity Effects on Unsteady Stretching Permeable Sheet.	Walailak Journal of Science and Technology (WJST)	11(7),2014	
53	Trilok Mathur, Ruchi Mathur and Deepa Sinha	Characterization and Subordination Properties for λ-Spirallike Generalized Sakaguchi Type Functions	Palestine Journal of Mathematics	3(1) 2014	
52	Trilok Mathur, Ruchi Mathur	Sufficient conditions for generalized	TWMS J. App. Eng. Math.	4(1), 2014. (FEYZİYE SCHOOLS FOUNDATION)	

	and Deepa Sinha	sakaguchi typefunctions of order _Beta		IŞIK UNIVERSITY	
51	D. Sinha and A. Dhama	Sign-compatibility of some derived signed graphs	Indian Journal of Mathematics	55(1) (2013), 23-40	
50	Deepa Sinha, Ayushi Dhama and B.D. Acharya	Unitary Addition Cayley Signed Graphs	European Journal of Pure and Applied Mathematics	6(2) (2013), 189-210 (New York Business Global, Maryland, USA)	
49	**D. Sinha and P. Garg**	A Characterization of Canonically Consistent Total Signed Graphs	Notes on Number theory and Discrete Mathematics	19(3)(2013), 70-77	
48	**D. Sinha, P. Garg and H. Saraswat**	On the splitting signed graphs	Journal of Combinatorics, Information and System Sciences,	38(2013), 103-111	
47	Jain R.; Sinha D. and Bhatnagar K. B.	Stability of the equilibria in the restricted-three body problem when the smaller primary is a finite straight segment	Invertis Journal of science & Technology	6(2), 100-114 (2013) (nvertis University)	
46	Kharbanda P., Agarwal D. and Sinha D.	Second order nonsmoothmulti objective fractional programming problem involving support	Journal of Applied Mathematics and Informatics	31 No. 5-6, 835-852, doi:10.14317/jami.2013.835. (2013) Korean Society of Applied and Computational Mathematics	

		functions			
45	Kharbanda P., Agarwal D. and Sinha D.	Generalized univex functions in nonsmoothmulti objective optimization	Journal of Mathematical Modelling and Algorithms	March 2013, 1-14, doi:10.1007/s10852-013-9218-8, (2013) **(Springer)**	
44	Kharbanda P., Agarwal D. and Sinha D.	Non smooth multi objective optimization involving generalized univex functions	Opsearch	May 2013, 1-18, doi:10.1007/s12597-013-0135-4, (2013) **(Springer)**	
43	Kharbanda P., Agarwal D. and Sinha D. (2013)	Multiobjective programming under(φ, d)-V-type I univexity.	Opsearch	September 2013, 1-18, doi:10.1007/s12597-013-0164-z **(Springer)**	

Some More Research Papers Published from 2002-2013

1. Mukti Acharya and **Deepa Sinha,** *A characterization of signed graphs that are switching equivalent to their jump sigraphs***,** Graph Theory Notes of New York, New York Academy of Sciences, New York, **XLIII** (2002), 7-8**.**

2. MuktiAcharya and**DeepaSinha,** *A characterization of sigraphs whose line sigraphs and jump sigraphs are switching equivalent,* Graph Theory Notes of New York, New York Academy of Sciences, New York, **XLIV** (2003), 30-34.

3. Mukti Acharya and **Deepa Sinha,** *A characterization of line sigraphs,* *Extended Abstract* In: Electronic Notes in Discrete Mathematics, **15** (2003)**.**

4. Mukti Acharya and **Deepa Sinha,** *characterizations of line sigraphs,* Nat. Acad. Sci.-Letters, **28**(1-2) (2005), 31-34**.**

5. MuktiAcharya and **Deepa Sinha,** *Common edge sigraphs,* **AKCE** International **Journal** of Graphs and Combinatorics, **3**(2)(2006), 155-130.

6. B.D. Acharya, Mukti Acharya and **DeepaSinha,***Cycle-Compatible Signed Line Graphs*, Indian Journal of Mathematics**, Allahabad Mathematical Society, 50**(2)(2008), 407-414.

7. B.D. Acharya, MuktiAcharya and **DeepaSinha,** *Characterization of a signed graph whose signed line graph is S-consistent*, Bulletin of The Malaysian Mathematical Sciences Society, **32**(3) (2009), 335-341.

8. **Deepa Sinha** and Diksha**,** *Supply Chain Model in a Multi-Echelon System with Inflation induced demand*, International Transactions in Applied Sciences, **2009**

9. P. Singh, N.S. Tomar and **D. Sinha,** *Numerical Study of Heat Transfer over stretching Surface in Porous media with Transverse Magnetic Field,* Proceedings of International Conference On Challenges And Applications Of Mathematics In Science And Technology, January 11-13, 2010, **Macmillan Advanced Research Series, Macmillan Publishers India limited,** ISBN 023- 032-875-X, **422-430.**

10. P. Singh, N.S. Tomar and **D. Sinha***, Mhd Oblique Stagnation-Point Flow Towards A stretching Sheet With Heat Transfer*, International Journal of Applied Mathematics and Mechanic, 6(13)(2010), 94-111.

11. Phool Singh, Ashok Jangid, N.S. Tomer and Deepa Sinha, *Effects of Thermal Radiation and Magnetic Field on Unsteady Stretching Permeable Sheet in Presence of Free Stream Velocity*, International Journal of Information and Mathematical Sciences, vol. 6(3)(2010) 63-69.

12. P. Singh, N.S. Tomer, S. Kumar and D. Sinha, *Effect of Radiation and Porosity Parameter on Magnetohydrodynamic Flow due to Stretching Sheet in Porous Media*, Thermal Sciences, 15(2)(2011), 517-526.

13. **D. Sinha** and P. Garg, *Some Results on semi-Total Signed Graphs*, Discussiones Mathematicae Graph Theory, 31 (2011) 625–638. (**Presented in the** "International conference on Mathematics and Computer Science" **held in Loyola College, Chennai, during February 05-06, 2010).**

14. **D. Sinha and** P. Garg, *On the Regularity of Some Signed Graph Structures*, **AKCE** International **Journal** of Graphs and Combinatorics, **8**(1) **2011, 63-74.**

15. **D. Sinha and P. Garg,** *Characterization of Total Signed Graph and Semi-Total Signed Graphs*, International **Journal** of Contemporary Mathematical Sciences, **6**(5) 2011, 221 − 228.

16. **D. Sinha and P. Garg,** *Balance and Consistency of Total Signed Graphs*, Indian Journal of Mathematics, **Allahabad Mathematical Society, 53**(1) **2011.**

17. **D. Sinha and P. Garg,** *Canonical consistency of signed line structures*, Graph Theory Notes of New York, LIX, 2011, 22-27.

18. **D. Sinha and** J. Kaur, *Full Friendly index set- II,* (**Presented** in the "International Conference on Mathematics and Computer Science" held in Loyola College, Chennai from February 05-06, 2010), The Journal of Combinatorial Mathematics and Combinatorial Computing, **79**(2011), 65-75**.**

19. **D. Sinha and P. Garg,** *Some Properties of Unitary Addition Cayley Graphs*, Notes on Number theory and Discrete Mathematics, **17**(3)2011, 49-59.

20. **D. Sinha and P. Garg,** *On the Unitary Cayley signed Graphs*, The electronic journal of combinatorics, 18 (2011), #P229.

21. Babita Tyagi, Ritu Kapoor, DeepaSinha, DevendraSawroopBhargava, *Enhanced One Dimensional Modeling for Predicting Concentration Of BOD in rivers*, *Journal of Natural sciences Research*, IISTE, 2(5)(2012),25-30. ISSN 2224-3186(Print), ISSN 2225-0921 (Online).

22. P. Singh, N.S. Tomer and D. Sinha, *Oblique Stagnation-Point Darcy Flow towards a Stretching Sheet*, Journal of Applied Fluid Mechanics, 5(3)2012, 29-37.

23. Babita Tyagi, Sapna Aggarwal, Ritu Malik and Deepa Sinha, **Modeling Dissolved Oxygen Conditions in Rivers due to Multiple Discharge Points**, *Proceeding of National Conference on Mathematical & Computational Sciences-6th& 7th July, 272-275, 2012 Adikavi Nannaya University, Rajahmundry [AP], India.*

24. Babita Tyagi, Ritu Kapoor, Deepa Sinha and D.S. Bhargava, *Mathematical Modeling and Simulation for Predicting DO Condition in Rivers*, International Journal of Environmental Protection, 2 (10)(2012), 29-34

25. Trilok Mathur, Ruchi Mathur and DeepaSinha, *Some starlike and convexity properties of Sakaguchi Classes for Hypergeometric Functions*, Int. J. Open Problems Complex Analysis, 4(1), 2012.

26. Ruchi Mathur and Deepa Sinha, *Coefficient inequalities for generalized sakaguchi type multivalent functions*, International Journal of Mathematical Archive, 3(7) (2012), 2558-2562.

27. Pallavi Kharbanda, Divya Agarwal and Deepa Sinha, *Generalized (d-ρ-η-θ) -Type I Univex Functions in Multiobjective Optimization*, Advances in Operations Research, Volume 2012 (2012), Article ID 279215, 13 pages.

28. Neeraj Tomer and D. Sinha, *Evaluating Machine Translation Evaluation's BLEU Metric for English to Indian Language Machine Translation*, International Journal of Computer Science, 1(6)2012, 48-58.

29. Neeraj Tomer, D. Sinha and P.K. Rai, *Evaluating Machine Translation Evaluation's F-Measure Metric for English to Hindi Language Machine Translation*, International Journal of Academy Research Computer Engineering and Technology-IJARCET, 1(7) 2012, 151-156.

30. Neeraj Tomer, D. Sinha and P.K. Rai: *Evaluation of Modified-BLEU Metric for English to Hindi Language Using ManTra Machine Translation Engine*, International Journal of Advanced Research in Electronics & Communication Engineering -IJARECE, 1(4)2012, 103-108.

31. Neeraj Tomer and D. Sinha, *Evaluating NIST Metric for English to Hindi Language Using ManTra Machine Translation Engine,* International Journal of Academy Research Computer Engineering and Technology-IJARCET, 1(8) 2012,365-369.

32. Neeraj Tomer and D. Sinha, *Evaluating Machine Translation Evaluation's NIST Metric for English to Hindi Language Machine Translation*, The International Journal of Multidisciplinary Academy IJMRA, 2(11) 2012, 359-371.

33. Neeraj Tomer, D. Sinha and P.K. Rai, *Evaluating BLEU Metric for English to Hindi Language Using ManTra Machine Translation Engine*, International Journal of Advance Research in Computer Science -IJARCS, 3(7) 2012, 318-322.

34. Mukti Acharya and Deepa Sinha, *Characterization of signed line digraphs*, Discrete Applied Mathematics**,** 161 (9)2013,1170-1172.

35. D. Sinha, S. Upadhayaya, P. Kataria, *Characterization of Common edge signed graphs*, Discrete Applied Mathematics**,** 161 (9)(2013),1275-1285.

36. D. Sinha and J. Kaur, *Full friendly index set —I*, Discrete Applied Mathematics**,** 161 (9) (2013), 1262-1274.

37. D. Sinha and A. Dhama, *Sign-compatibility of some derived signed graphs*, Indian Journal of Mathematics**,** 55(1) (2013), 23-40.

38. D. Sinha and A. Dhama, *Sign-compatibility of common-edge sigraphs and 2-path sigraphs,* **Graph Theory Notes of New York,** LXV(**2013**)55-61.

39. D. Sinha and A. Dhama, *Negation switching invariant signed graphs,* Electronic Journal of Graph Theory and Applications, 2 (1) (2014), 32–41.

40. *Kharbanda P., Agarwal D. and* **Sinha D.** *(2014)-Nonsmoothmultiobjective programmingproblem involving (dI − ρ − σ)-V-type I functions. International Journal of Operational Research, Vol. 21, No. 1,1-24.*

41. *Kharbanda P., Agarwal D. and* **Sinha D.** *(2013)-Non-differentiable multiobjective programming under generalized function. International Journal of Operational Research (Accepted).*

42. D. Sinha and A. Dhama, *Canonical sign-compatibility of semi-total and total signed graphs*, Calcutta Mathematical Society, 106(1) 2014, 55-64.

Annexure-1B

Form of publication	Title	Author(s) / Editor(s)	Publishers	ISBN No.	Date of Publication
Authored Book	**AMIETE Question Answer series, solutions to six question papers of Mathematics-1998-2001**	Deepa Sinha			2002
Authored Book	**AMIETE Question Answer series, solutions to six question papers of Numerical analysis & Computer Programming-1998-2001**	Deepa Sinha			2002
Edited Book	**Special Issue**: International Conference on Graph Theory and Computation.	Deepa Sinha, Thomas Zaslavsky and Tao Ming Wang	Elsevier	0972-8600	April 2018
Edited Book online	**Proceedings** of International Conference on Graph Theory and Computation.	Deepa Sinha, Thomas Zaslavsky G.O.H Katona. Tao Ming Wang	Elsevier	1571-0653	December 2017

onferences / workshops / symposia attended or organized July 2016 -till date

	Seminar/Conference	Venue and Dates	Your role Participated only/ Presented paper / Chaired session	Title of paper presented, if any
1.	One day symposium in mathematics on the National Mathematics Day	School of Physical Sciences (SPS), Jawaharlal Nehru University, India, during December 22, 2022.	• Participated • Gave an invited Talk	*'Signed Graph Application'*
2.	International Conference on Real World Domains and Interfaces in Mathematics: Challenges Tools & Strategies (ICRWDIM-2022)	Department of Mathematics, University of Rajasthan, Jaipur, India. December 17-18, 2022.	• Participated • Gave an invited Talk	'ENCRYPTION AND DECRYPTION OF SIGNED GRAPH THROUGH RSA *ALGORITHM'*
3.	5th International Conference on Recent Advances in Mathematical Sciences with Applications in Engineering and Technology (IC-RA-MSA-ET-2022) on the occasion of Golden Jubilee Celebration of Vijnana Parishad of India (Society for Applications of Mathematics),	School of Computational and Integrative Sciences, Jawaharlal Nehru University, India, June 16-18, 2022.	• Participated • Gave an invited Talk	*'Spectrum of the iterated local transitivity signed model'*
4.	National Seminar on Current Scenario in Graph Theory and its Applications,	Department of Mathematics, V. V. Vanniaperumal College for Women, Virudhunagar, India, during February 2, 2022	• Participated • Gave an invited Talk	*'Secured Network Using Signed Graphs'*
5	A two-week Online Refresher Course (RC) on ''Applicable Mathematics(AM)	Department of Mathematics, Deshbandhu College, University of Delhi, Delhi in collaboration with Teaching Learning Centre (TLC), Ramanujan College, University of Delhi under the umbrella of Pandit Madan Mohan Malviya National Mission	• Participated • Gave an invited Talk	*"Graph Theory Applications In Online Social Network"* *"Signed Network Application For Network Security"*

6	International Symposium: Applied Mathematics, Modeling, Analysis and Simulations (ISAMMAS)",	Department of Mathematics, South Asian University, Delhi, and Faculty of Science, University of Colombo, Sri Lanka	• Participated • Gave an invited Talk	*"Embedding of Sign-regular Signed Graphs and its Spectral analysis"*
7	A weekly online seminar on Graphs, matrices, and applications	Department of Mathematics, IIT Kharagpur from July 2020 on October 29, 2021.	• Participated • Gave an invited Talk	*"SPECTRAL ANALYSIS OF t-PATH SIGNED GRAPHS"*
8	27th International Conference of International Academy of Physical Sciences (CONIAPS XXVII) on Recent Advances in Mathematical and Computational Optimizations (RAMCO-2021)(ONLINE)	School of Computational and Integrative Sciences, JNU, New Delhi and International Academy of Physical Sciences (IAPS), October 26-28, 2021.	• Participated • Gave an invited Talk	*"Spectral Analysis of Signed Social Networks"*
9	"27th International Conference of the International Academy of Physical Sciences on Graph Theory and Applications" (CONIAPS-XXVII-GTA-2021)	School of Physical and Applied Sciences of Goa University, Goa-India and the International Academy of Physical Sciences (IAPS) Prayagraj, India.	• Participated • Gave an invited Talk	*"Sign-Regular Signed Graphs and it's Embeddings"*
10	Fundamentals of Graph Theory in FDP-56,	Faculty Development Centre at Hans Raj College, University of Delhi during September 15-21, 2021.	• Participated • Gave 4 invited Talk	*Graph Theory and its applications*
11	Online workshop on Recent Trends in Domination and Graph Labelling (RTDGL 2021)	Department of Mathematics, Ramanujan College, University of Delhi in collaboration with Academy of Discrete Mathematics and Applications (ADMA)	• Participated • Gave 2 invited Talk	*Full Friendly Index Set*

12	The Summer/Winter School [Multidisciplinary] through virtual mode	UGC-Human Resource Development Centre, BHU for College and University teachers January 16 to 29, 2021.	• Participated • Gave an invited Talk	*"Security of Networks"*
13	Faculty Development Program on "Contemporary Trends in Science and Technology"	Amity School of Engineering and Technology, Patna. 5-9 April, 2021.	• Participated • Gave an invited Talk	*New Frontier in the Theory of Signed Graphs: Encryption- Decryption*
14	"Refresher Course in Mathematics"	Department of Mathematics, Ramanujan College, in collaboration with Teaching Learning Centre, Ramanujan	• Participated • Gave an invited Talk	*"Signed Network Application for Network Security"*
15	National Mathematics Day,	Department of Mathematics, Karnataka University, Dharwad, India, December 22, 2020.	• Participated • Gave an invited Talk	*"Encryption and Decryption using Graph Structures"*
16	"Graph Theory Application in securing Network." in the one-day webinar to celebrate the magic of mathematics on the eve of National Mathematics Day	SCIS and SPS, Jawahar Lal Nehru University, Delhi, December 22, 2020.	• Participated • Gave an invited Talk	*"Graph Theory Application in securing Network."*
17	26th International Conference of International Academy of Physical Sciences on "Advances in Differential Equations & Mathematical Modelling" (IC-ADE-MM-2020),	School of Computational and Integrative Sciences, JNU, New Delhi & International Academy of Physical Sciences (IAPS), December18-20, 2020.	• Participated • Gave an invited Talk • Chaired the session	*"Spectral Analysis of Unitary Addition Cayley Graphs"*

18	28th International Conference (Virtual) of Forum for Interdisciplinary Mathematics (FIM) - Synergies in Computational, Mathematical, Statistical and Physical Sciences (FIM 28: SCMSPS 2020)	Stella Maris College, Chennai and Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, Tamilnadu, November 23- 27, 2020.	• Participated • Gave an invited Talk • Chaired the session	*"The characteristic polynomial of a graph containing loops"*
19	Webinar for the undergraduate students organized	Department of Mathematics, Maitreyi College, University of Delhi, October 27, 2020.	• Participated • Gave an invited Talk • Chaired the session	*"ILT Model and Social Network"*
20	Online International Conference on Graph Labeling and Applications ICGLA-2020 (Webinar) in loving memory of late Prof. B.D. Acharya	Department of Mathematics of Goa University, Goa, September 17-19, 2020.	• Participated • Gave an invited Talk • Chaired the session	*"Iterated Local Transitivity Model for Signed Graphs"*
21	Five- Day International Conference on Recent Trends in Mathematics and Its Applications to Graphs, Networks and Petri Nets (ICRTMA-GPN-2020)	School of Computational and Integrative Sciences, Jawaharlal Nehru University, New Delhi, July 20− 24, 2020.	• Participated • Gave an invited Talk • Chaired the session	*"Embedding of Signed Regular Graphs and its Spectral analysis"*
22	A virtual lecture on "Graph Theory" as a learning platform for the students during pandemic situation of Novel Covid-19, for the undergraduate and post graduate students of PG and Research	Department of Mathematics, Sri Vidya Mandir Arts and Science College, Uthangarai, Tamil Nadu, June 25, 2020.	• Participated • Gave an invited Talk	*Graph Theory*

23	Webinar	Department of Engineering Science and Humanities, KLE Dr. M. S. Sheshgiri College of Engineering and Technology, Belagavi-08, June 16, 2020.	• Participated • Gave an invited Talk	***"Graph Theory Applications in Online Social Networks"***
24	Three-Day "National Webinar on Applications of Mathematics and Contemporary use of its Scientific & Technical Terminology in Hindi (AM-CUSTT-H-2020)"	Commission for Scientific and Technical Terminology, MHRD, Govt. of India, India and School of Computational and Integrative Sciences, J.N.U., New Delhi-110067, India,	• Participated • Gave an invited Talk	***"Online Social Networks Using Signed Graphs"***
25	3rd International Conference on Soft Computing and Mathematical Modelling,	KIET Group of Institutions Delhi-NCR, Meerut Road (NH-58), Ghaziabad - 201206, India, 22-23 December, 2019.	• Participated • Gave an invited Talk • Chaired the session	
26	International Conference on Applicable Mathematics: Network Science	Ramanujan College, University of Delhi, New Delhi, India. 19-21December, 2019.	• Participated • Gave an invited Talk • Chaired the session	
27	"International Conference on Recent Trends in Materials and Devices (ICRTMD-2019)",	Amity University, Noida, India, 18-19 December, 2019.	• Participated • Gave an invited Talk	"Social Networks"
28	International Conference on Mathematical Analysis and its Application (ICMAA-2019),	South Asian University, New Delhi, India. December14-16, 2019	• Participated • Chaired the session • Organising committee	
29	"Emerging Computational Methods for Science and Engineering Applications",	Jaypee Institute of Information Technology, Noida, India. 15-16 March, 2019.	• Participated • Gave an invited Talk	Social Network Model using signed graphs
30	International Conference on Recent Developments in Theory and Computation & Application of Differential	South Asian University, January 21-23, 2019.	• Participated • Chaired the session • Coordinator	

31	5th Refresher Course in Contemporary Studies (Interdisciplinary)	School of Computational & Integrative Sciences, Jawaharlal Nehru University, 9 Jan, 2019	• Participated • Gave an invited Talk	Social Network
32	INTERNATIONAL CONFERENCE ON DISCRETE MATHEMATICS	St. Joseph's College, Tiruchirappalli, India. 7-9 January, 2019	• Participated • Chaired the session	
33	International Conference on Graph Theory and its Applications	Amrita Vishwa Vidyapeetham, Coimbatore, India 4th -6th January, 2019	• Participated • Gave an invited Talk	Online social Network Using Signed Graphs
34	2nd International Conference on Advances in Computational Mathematics	Tribhuvan University Kathmandu, Nepal December 23-24, 2018	• Participated • Gave an invited Talk • **Convener**	SIGNED GRAPHS WHOSE DERIVED SIGNED GRAPHS ARE SYMMETRIC ABOUT ORIGIN
35	International Conference on Discrete Mathematics ICDM-VI (2018))	National College, Tiruchirappalli December 14 – 17, 2018	• Participated • Gave an invited Talk	CHARACTERIZATION OF SIGNED GRAPHS WHOSE t-PATH SIGNED GRAPHS ARE SYMMETRIC ABOUT ORIGIN
36	International Conference on Mathematical Modelling and Simulations	South Asian University, December 1-3, 2018.	• Participated • Chaired the session • Coordinator	
37	Two days course on swarm and evolutionary computation	South Asian University, November 24-25, 2018.	• Participated	
38	2nd International Conference on Frontiers of Science and Technology - 2018	KIET Group of Institutions, Ghaziabad July 21-22, 2018.	• Participated • Gave an invited Talk • Chaired the session	Signed path Structures and its Applications to encryption decryption
39	International Conference on Discrete Mathematics and its Applications to Network Science	BITS Pilani Goa Campus, 7-10 July, 2018	• Participated • Gave an invited Talk • Chaired the session	Spectral Analysis of t-path Signed Graphs
40	International Conference on Mathematical Modeling and Computations in Bio-Systems, 12-14 March, 2018, Department of Mathematics, IIT Roorkee, Roorkee, India.	Indian Institute of Technology Roorkee, 12-14 March, 2018	• Participated • Gave an Invited Talk	An Epidemic Models on Signed Graph: A Tuberculosis Model

41	Applications of Graphs and Networks in Computational Studies, Bioinformatics, Engineering and its Technical Terminology, 12-14 March, 2018, Jawaharlal Nehru University, in collaboration with Council for Scientific and Technical Terminology, Ministry of Human Resource Development, Department of	Jawaharlal Nehru University, Delhi, India, 12-14 March, 2018	• Participated • Gave an invited Talk • Chaired the session	Computation of Graph Structures for Encryption and Decryption.
42	4rth International Conference on Harmony Search, Soft Computing and Applications, BML Munjal University, Gurugram, Haryana, India, Feb 7-9, 2018.	BML Munjal University, Gurugram, Haryana, India, Feb 7-9, 2018.	• Chaired a Session • Participated	
43	International Conference on Algebra and Discrete Mathematics-ICADM 2018.	Department of Mathematics, Directorate of Distance Education, Madurai Kamraj University, Madurai-625021, India, January 8-10, 2018.	• Participated • Chaired the session • Delivered an Invited talk • Presented a paper	Some Derived Signed Graphs and its Spectrum Characterization of Rings whose Zero divisor Graphs are Isomorphic. **(Conference paper)**
4	International Conference on Discrete Mathematics (ICDM-2018).	Department of Mathematics, Periyar University, Tamil Nadu, India	• Participated • Chaired the session • Presented a paper	Structural Properties of Beck's Zero Divisor Graphs **(Conference Paper)**
45	7nth International Conference on Soft Computing for Problem Solving, SocPros 2017.	Indian Institute of Technology, Bhubaneshwar, Orissa, India, Dec 23-24, 2017	• Participated • Chaired 3 sessions • Keynote Speaker • Presented a	Applications of Signed Graphs **(Keynote talk)** Computing the Balance set using Linear programming Optimization **(Conference Paper)**
46	International Conference on Current Trends in Theoretical and Computational Differential Equations with Applications	South Asian University, December 1-5, 2017.	• Participated • Chaired 2 sessions • Presented a paper	Spectral Analysis of the Signed grid **(Conference Paper)**
47	Short Term training Programme in Graph theory and its Applications	SRM University, Kattankulathur, Nov 3-4, 2017	• Participated • Invited Talk	Iterated Local Transitivity Model

48	International Conference on Computational Modeling and Simulation	Faculty of Science, University of Colombo, Sri Lanka 17-19 May, 2017.	• Participated • Invited Speaker • Presented 2 papers	Dynamic Model Using Signed Graphs **(Invited talk)** Some Properties of Signed Graphs of Cayley sum graphs **(Conference Paper)** Some Properties of Comaxial Graphs **(Conference Paper)**
49	Symposium on Applied Mathematics	Department of Mathematics, St Stephen's College, New Delhi, India. March 21-22, 2017	• Participated • Invited Talk	Graph Structures and its Applications **(Invited Talk)**
50	International Conference on advances in Computational Mathematics-2017	Department of Mathematics, University of Dhaka, Bangladesh, 27-28 May, 2017	• Participated • Presented a paper • Plenary Talk	On Cayley Sum Signed graphs **(Conference Paper)** Computation of Graph Structures for Encryp Decryption **(Plenary Talk)**
51	6nth International Conference on Soft Computing for Problem Solving, SocPros 2016.	School of Mathematics, Thapar University, Patiala Dec 27-28, 2016	• Participated • Chaired a session	
52	International Workshop on Computational Intelligence (IWCI 2016)	Department of Computer Science and Engineering, Jahangirnagar University, Dhaka, Bangladesh; 12-13 Dec., 2016	• Organized • Participated • Gave a Keynote Talk • Presented a paper • Presented a paper	• Square Signed Graphs **(Keynote)** • Embedding of (i,j) regular signed graphs in (i+k, j+l) regular signed gr (**Conference paper)** • On two path signed graphs (**Conference paper)**
53	Seminar at KIIT University at Bhunbaneshwar, Odisha, India	KIIT University at Bhunbaneshwar, Odisha, India; 11 November 2016.	• Gave an invited Talk	2-path signed graphs and its application.
54	National Conference on Algebra, Analysis, Coding and Cryptography in the honor of Prof. B. K. Dass	University of Delhi, New Delhi; 14-15 October 2016	• Participated • Gave an invited Talk	Dynamic model of online social network using signed graphs
55	International Conference on Current Trend in Graph Theory and Computation	South Asian University; 17-19 September, 2016	• Organized **(General Chair)**	…

56	International Conference on Mathematical Modeling and Simulation under the auspices of Indian Academy of Mathematical Modeling and Simulation, with HQ at at IIT Kanpur	Banaras Hindu University, Varanasi;' 29-31 August, 2016	• Participated • Gave an invited Talk • Chaired one session	Iterated Local Transitivity model for Signed Networks
57	Wayamba International Conference (WinC-2016)	Wayamba University of Sri Lanka, Srilanka; 19-20 August, 2016	• Participated • Presented Paper • Chaired one	Iterated Local Transitivity model for Signed Networks **(Conference paper)**
58	Workshop on Mathematical Sciences	Wayamba University of Sri Lanka, Srilanka; 20 August 2016.	• Participated	

Conferences / workshops / symposia attended or organized from August 2012-JUNE 2016

...ternational Conference on Emerging Trends in ...uid Mechanics and Graph Theory	Christ University, Bangalore, India; August 16-18, 2012	• Participated • Gave an Invited Talk • Chaired one session	Unitary Cayley Signed Graphs
...ational Seminar on Frontiers of Mathematics-...012	Ethiraj College for Women, Chennai-India; October 15-16, 2012	• Participated • Gave an Invited Talk	On the Unitary Cayley Signed Graphs
...ational workshop on Mathematics and its ...pplications	Deenbandhu Chhotu Ram University of Science & Technology, Murthal (Sonepat) Haryana; October 18-19, 2012	• Participated • Gave an Invited Talk	Unitary Addition Cayley Signed Graphs
...ational Workshop on Bio Mathematics and ...ostatistics	Banasthali University, Rajasthan, India; November 2-5, 2012	• Participated	…
...ternational conference "...he Legacy of Srinivasa Ramanujan"	Delhi University, Delhi; Dec 17-22, 2012	• Participated	…
...ymposium on Computational Techniques and ...athematical Modeling;	South Asian University; April 5-6, 2013	• Participated • Chaired one session • organised	…
...structional Workshop on Applied Mathematics	South Asian University; May 6-10, 2013.	• Participated • Chaired one session • Organized	
...e-ICDM-2013 Instructional Workshop on ...ecent Advances in Spectral Graph Theory	Wrangler Dr. D.C. Pavate Institute of Mathematical Sciences (PIMSci), Karnatak University Campus, Pavate Nagar, Dharwad-580003, India; June 5-9, 2013	• Participated	…
...ternational Conference on Discrete ...athematics	Wrangler Dr. D.C. Pavate Institute of Mathematical Sciences (PIMSci), Karnatak University Campus, Pavate Nagar, Dharwad-580003, India; June 10-14, 2013	• Participated • Gave an invited talk	Negation Switching Invariant t-path signed Graphs
...ymposium on Discrete Mathematics and ...iscretization Methods	Department of Mathematics, South Asian University, New Delhi 110021 (India); October 25-26, 2013	• Organized • Participated • Chaired four sessions	…
...day workshop on 'Orthogonal Spline ...ollocation Methods for Partial Differential ...quations'	Department of Mathematics, South Asian University, New Delhi 110021 (India); 21st – 24th March, 2014.	• Organized • Participated • Chaired one sessions	-
...merging Trends in Computational and Applied ...athematics	Dept. of Applied Science, ITM University, Gurgaon, India; 2-4 June, 2014	• Participated • Presented a paper	Algorithmic characterisation of graphs isomorphic to 2-path graphs and square
...h Annual conference of ADMA	REVA INSTITUTE OF TECHNOLOGY AND MANAGEMENT; 10th-13th JUNE 2014	• Participated • Gave an invited talk	Algorithmic Characterization of Line Signed graphs
...ternational Conference on Soft Computing ...echniques for Engineering and Technology-...014(ICSCTET-2014	Graphic Era Hill University,Bhimtal Campus, District- Nainital-263132 Uttarakhand; 7-8 Aug, 2014	• Participated • Gave an invited talk • Chaired two sessions	Algorithmic Characterization of Consistent Line Signed graphs,

...ational School of recent Computational trend ... techniques in Computer Science	Department of Computer Science and Informatics, University of Kota; October 8-9, 2014	• Participated • Gave an invited talk • Chaired two sessions	Algorithmic Characterization of Signed graphs
...rd International conference of Forum for ...terdisciplinary Mathematics on ...terdisciplinary Mathematical, Statistical and ...omputational Technique- 2014	Department of Mathematical and Computational, National Institute of Technology Karnataka, Surathkal; December 18-20, 2014	• Participated • Gave an invited talk • Chaired two sessions	1.Algorithms and graphs 2. Algorithmic Characterization of S-Consistency in line Signed graphs and its Applications
...h International Conference on Soft computing ...r Problem Solving	National Institute of Technology Silcher, Assam; December 27-29, 2014.	• Participated • Gave an invited talk • Chaired two sessions	Line graphs and its Applications
...ational Conference on Recent Trends in Graph ...heory and its Applications" (NCRTGTA-...15)	Department of Mathematics, Mangalore University, Mangalore; February 5-6, 2015	• Participated • Gave an invited talk	Edge Full Friendly Index Set
...ational Conference on Computational ...athematics in Engineering &26th Annual ...onference of Rajasthan Ganita Parishad	Department of Mathematics & Department of Computer Science Engineering, University College of Engineering, Rajasthan Technical University, Kota; 23rd to 24th Feb., 2015.	• Participated • Gave an invited talk	Computation of Graph Structures for Encryption Decryption
...DVANCED Workshop on ...NITE DIFFERENCE methods for differential ...uations	Department of Mathematics, South Asian University, Delhi-110021; March 13-17, 2015	• Organized • Participated • Chaired two sessions •	…
...ational Women Conference 2015 on Women ... Science, Promoting Excellence and ...novation for Future Development, 2015	Jiwaji University, Gwalior; March 25-27, 2015	• Participated • Gave an invited talk .	Computation of Graph Structures for Encryption Decryption
...orkshop on Network Analytics	Department of Computer Science, University of Delhi; April 10, 2015	• Participated • Gave an invited talk	Computation of Graph Structures for Encryption Decryption
...outh Asian Mathematics Research Scholars ...eet	Department of Mathematics, South Asian University; May 8-9, 2015 Delhi-110021	• Organized • Participated • Chaired two sessions	-
... nth Annual Conference of Academy of ...screte Mathematics and Application, 2015.	Department of Mathematics & Actuarial Science, BS Abdur Rehman University, Chennai; June 10-12, 2015	• Participated • Presented Paper • Chaired one session	Characterization of Square signed graphs (**Conference paper**)
...pplication of Optimization Techniques for ...ngineering & Technology" Under TEQIP-II,	Department of Applied Science Madhav Institute of Technology & Science, Gwalior; Nov. 23rd - 27th, 2015	• Participated • Gave an invited talk	Algorithmic Characterization of 2-path Signed graphs
...nternational Conference On Function Spaces ...d Inequalities	Department of Mathematics, South Asian University, Delhi-110021; December 8-12, 2015.	• Participated • Organized	
...nternational Conference on Graph Theory and ... Applications	Amrita School of Engineering, Coimbatore; December 16-19, 2015.	• Participated • Gave an invited talk	Absorption Caley Graphs
...nternational conference on current trends in ...DEs: Theory and computations	Department of Mathematics, South Asian University; December 28-30, 2015.	• Participated • Chaired a session	…
...ational Workshop "ADVANCE ...ECHNIQUES IN MATHEMATICS, PHYSICS ... COMPUTER SCIENCES (WATMPCS-16).	Department of Applied Science, SRM University, NCR campus, Ghaziabad UP; 18-20 Feb, 2016	• Participated • Gave an invited talk	Iteratd Local transitivity modelfor signed social network

he Day Intensive Workshop on Nature Inspired otimization Techniques	South Asian University, New Delhi; 19th March, 2016	• Participated • organised	
DMA PRE-Conference WORKSHOP ON ECENT ADVANCES IN SIGNED GRAPHS ND THEIR APPLICATIONS	Department of Mathematics, Siddaganga Institute of Technology, Tumkur, Karnataka, JUNE 6-8 2016.	• Participated • Gave six lectures	2 LECTURES on: Balance and Consistency 4 lectures on: Algorithmic graph theory

Conferences/workshops/symposia attended or organized from 2001-July 2012

1. Conference on Graph Theory and its Applications, Anna University, Chennai, March 14-16, 2001, and presented the paper "**A Characterization of signed graphs which are switching equivalent to their jump signed graphs**"

2. National Workshop on Emerging Frontiers in Combinatorial Optimization conducted at Department of Mathematics, University of Pune, June 21-28, 2002

3. R.C.Bose Centenary Workshop on Discrete Mathematics and Applications, Indian Statistical Institute, Kolkata, December 15-19, 2002

4. R.C.Bose Centenary Symposium on Discrete Mathematics and Applications, Indian Statistical Institute, Kolkata, December 20-23, 2002 and presented the paper "**Characterization of line signed graphs**"

5. Group Discussion on Energy of a Graph, Department of Mathematics, Karnataka University, Dharwad, July 7-15, 2003

6. National Conference on Information Technology, Operations Research and Computing, DauDayal Institute of Vocational Education, Dr. B.R.Ambedkar University, Agra, April 10-12, 2004, and presented the paper "**Characterization of Sigraphs whose Iterated Line Sigraphs are S-Consistent**"

7. 19th Annual Conference, Ramanujan Mathematical Society, Department of Mathematics, Dr. B.R. Ambedkar University, Agra, July 21-24, 2004, and presented the paper "**Characterization of Sigraphs whose Line Sigraphs are S-Consistent**"

8. National Seminar on Algebra, Analysis and Discrete Mathematics, University of Kerala, January 12-14, 2005, and presented the paper "**Negation Switching invariant 2-path and 3-path signed graphs**"

9. CARDMATH Group Discussion on Signed Discrete Structures and Applications, Regional Institute of Education (RIE), Mysore, November 15-24, 2005 and was a **Tutorial head** for the Group Discussion.

10. National Seminar on Recent Trends in Combinatorics and its Applications (**NSRTCA-2006**), BanasthaliVidyapith, March 5-6, 2006 **(Organizer)**.

11. National Workshop on Graph Theory and Applications, North Eastern Regional Institute of Science and Technology (NERIST), Nirjuli (Itanagar), October 9-16, 2006.

12. Training Program on Stochastic Modeling: Concepts, Theory & Applications, BanasthaliVidyapith, December 2-15, 2006 **(Organizer)**.

13. International Conference on Discrete Mathematics, Indian Institute of science, Bangalore, December 15-18, 2006, and presented the paper "**Negation Switching invariant 2-path Sigraphs**".

14. International Conference on Number Theory and Combinatorics, Shanmugha Arts, Science, Technology & Research Academy, SASTRA University, Kumbakonam, December 19-22, 2006, and presented the paper "**Sign-Compatibility of Some Sigraph Equations**".

15. National Seminar on Models of Embedded Computation, BanasthaliVidyapith, March 15-19, 2007**(Organizer)**.

16. National Workshop on Bayesian Techniques and its Applications, Banasthali University, Oct 1-7, 2008**(Organizer)**.

17. International Jubilee Conference on Women's Education, Banasthali University, November 11-13, 2008.

18. Training Programme on Optimization Techniques, Banasthali University, December 24-29, 2008.**(Organizer)**.

19. Pre Conference workshop on Discrete Mathematics, Banasthali University January 6-10, 2009, **Coordinator.**

20. International, Jubilee Conference on Discrete Mathematics, Banasthali University, 11-13 Jan 2009, and presented the paper "**Characterization of Line Sidigraph"**.

21. National Workshop on "INTRODUCTION TO GRAPHS AND GEOMETRIC ALGORITHMS", Birla Institute of Technology & Science, Pilani-333031, Rajasthan, 22-24 January 2009.

22. National Seminar on Time Series Modeling, Banasthali University, Oct. 3-6, 2009**(Organizer)**.

23. National Workshop on Mathematical Modeling, Banasthali University, Dec. 15-19, 2009**(Co-Coordinator)**.

24. National Workshop on Graph Theory Applied to Chemistry, Centre for Mathematical Sciences, Pala, Kerala, February 1-3, 2010**.**

25. National Workshop on Discrete Mathematics, Banasthali University, May 1-5, 2010**(Coordinator)**.

26. International Congress of Mathematicians, Hydrabad, August 19-27, 2010.

27. 19th International Conference of FIM, Patna University, Patna, 18-20 December 2010.

28. National Conference, Mathematics Meet -2011, Department of Mathematics, Gujrat University, Ahmedabad, February 3-5, 2011.

29. National Workshop on Block design and Applications, Banasthali Feb 5-8, 2011.**(Organizer)**

30. National Workshop on Inventory Modeling, Centre for Mathematical Sciences, Banasthali, March 4-7, 2011.(**Organizer**)

31. National Instructional Workshop on GRAPH THEORY & ITS APPLICATIONS (WGTA-2011),Centre for Interdisciplinary Mathematical Sciences(CIMS) & Department of Computer Science, Banaras Hindu University, Varanasi-221005, May 23-28, 2011.

32. National Conference on Mathematical Modeling and Computer Simulation, Bhabha Group of Institutions, July 7-9, 2011.

33. National Workshop on Linear and Non-Linear Systems, Banasthali University, Dec. 15-19, 2011**(Coordinator)**.

34. International Conference On Mathematics In Engineering & Business Management, STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAIAND LOYOLA INSTITUTE OF BUSINESS ADMINISTRATION, Chennai, March 9 - 10, 2012.

35. National Workshop on Inventory and Transportation, Banasthali University, March 15-18, 2012**(Organizer)**.

36. National Workshop on Cryptography and Number Theory, Banasthali University, May 15-18, 2012**(Coordinator)**.

37. "*Pre-Conference Workshop on Algebraic Graph Theory*" organized by Department of Mathematics,   V.V.Vanniaperumal during **4-7 June, 2012.**

38. "Eighth Annual Conference of Academy of Discrete Mathematics and Application (ADMA) and Graph Theory Day VIII" organized by Department of Mathematics, V.V.Vanniaperumal, **8-10 June, 2012**

Papers Presented by me/ my scholars from 2001-2012 July

1. Conference on Graph Theory and its Applications, Anna University, Chennai, March 14-16, 2001, and presented the paper "**A Characterization of signed graphs which are switching equivalent to their jump signed graphs**"

2. R.C.Bose Centenary Symposium on Discrete Mathematics and Applications, Indian Statistical Institute, Kolkata, December 20-23, 2002 and presented the paper "**Characterization of line signed graphs**"

3. National Conference on Information Technology, Operations Research and Computing, DauDayal Institute of Vocational Education, Dr. B.R.Ambedkar University, Agra, April 10-12, 2004, and presented the paper "**Characterization of Sigraphs whose Iterated Line Sigraphs are S-Consistent**"

4. 19th Annual Conference, Ramanujan Mathematical Society, Department of Mathematics, Dr. B.R. Ambedkar University, Agra, July 21-24, 2004, and presented the paper "**Characterization of Sigraphs whose Line Sigraphs are S-Consistent**"

5. National Seminar on Algebra, Analysis and Discrete Mathematics, University of Kerala, January 12-14, 2005, and presented the paper "**Negation Switching invariant 2-path and 3-path signed graphs**"

6. International Conference on Discrete Mathematics, Indian Institute of science, Bangalore, December 15-18, 2006, and presented the paper "**Negation Switching invariant 2-path Sigraphs**".

7. International, Jubilee Conference on Discrete Mathematics, Banasthali University, 11-13 Jan 2009, and presented the paper "**Characterization of Line Sidigraph**".

8. M. Acharya and **D. Sinha**, *Characterization of the Line Sidigraph*, **Presented** in International Jubilee Conference of Discrete Mathematics (11-13 January, 2009).

9. P. Garg and **D. Sinha,** *Regularity of ×-line Signed Graph and Total Signed Graph*, **Presented** in International Jubilee Conference of Discrete Mathematics (11-13 January, 2009).

10. J. Kaur, N. Khandelwal and **D. Sinha**, *Full Friendly Index Set of Some Graphs*, **Presented** in International Jubilee Conference of Discrete Mathematics (11-13 January, 2009).

11. J. Kaur and **D. Sinha***, Full Friendly Index Set of Some more Graphs,* (**Presented** in the"International Conference on Mathematics and Computer Science"held in Loyola College, Chennai from February 05-06, 2010)**.**

12. P. Garg and **D. Sinha,** *Some Results on semi-Total Signed Graphs*, **accepted for publication** in DiscussionesMathematicae Graph Theory, (**Presented** in the"International conference on Mathematics and Computer Science"held in Loyola College, Chennai from February 05-06, 2010).

13. P. Garg and **D. Sinha,** *Balance and Consistency of Total Signed Graphs*, **(**Presented in the **"**75th Annual Conference of The Indian Mathematical Society (IMS)**"** organized by National Centre for Advanced Research in Discrete Mathematics (n-CARDMATH), Kalasalingam University from December 27-30, 2009)**.**

14. P. Garg and **D. Sinha,** *Regularity of Total Signed Graphs of Regular Signed Graphs*, (Presented in the **"**Fifth Annual Instructional Conference of ADMA and Graph Theory Day V**"** organized by The Academy of Discrete Mathematics and Applications (ADMA) and Periyar University, Selamfrom June 08-10, 2009**.**

15. **D. Sinha, S. Upadhayaya, P. Kataria,** *Characterization of Common edge signed graphs*, **Presented** in the National Conference, Recent Drifts, Break in applied Science and it's Technology for Innovations, Management, August 7-9, 2009.

16. P. Singh, N.S. Tomar and **D. Sinha,** *Effect of Radiation and Porosity Parameter on MHD Flow due to Stretching Sheet in Porous Media***,** **Accepted for publication** in *Thermal Sciences (Impact Factor .301).*

17. P. Singh, N.S. Tomar and **D. Sinha,** *Numerical study of Heat Transfer over Stretching Surface in Porous Media with Transverse Magnetic Field***, Presented** in the International conference On Chalenges and applications of mathematicsin Science and Technology, January 11-13, 2010, NIT, Bhuvneshwar.

18. **D. Sinha** and P. Garg**,** *Some Results on Tensor Product of Two Graphs,***.**

19. **D. Sinha** and P. Garg*, Canonical Consistency of Semi-Total Signed Graphs,***Presented** in the Satellite conference of Discrete Mathematics held in Cochin.

20. **D. Sinha** and P. Garg*, C-Consistency of Signed line Structures,* **Presented** in International Conference of Mathematicians (ICM), 2010, Hydrabad, August 19-27, 2010).

21. **D. Sinha** and P. Garg*, Unitary Cayley Signed Graphs,* **Presented** in 19th International Conference of FIM, Patna University, Patna, 18-20 December 2010.

22. Deepa Sinha and JaspreetKaur, Edge Friendly-I, 76th annual conference of Indian mathematical society, SVNIT, Surat, Dec 27-30, 2010.

23. **D. Sinha** and P. Garg, *On the balance notion of Tensor signed product*, **Presented** inthe National Instructional Workshop on graph theory & its applications (WGTA-2011), Centre for Interdisciplinary Mathematical Sciences (CIMS) & Department of Computer Science, Banaras Hindu University, Varanasi-221005, May 23-28, 2011.

24. **D. Sinha** and A. Dhama, *Negation switching invariant 1-path signed graphs*, **Presented** in the National Instructional Workshop on graph theory & its applications (WGTA-2011),Centre for Interdisciplinary Mathematical Sciences(CIMS) & Department of Computer Science, Banaras Hindu University, Varanasi-221005, May 23-28, 2011.

25. **D. Sinha** and A. Dhama, *Sign-Compatibility of Common-Edge Sigraphs and 2-Path Sigraphs*, **Presented at** in "National Conference on Theoretical Computer Science and Discrete Mathematics" organized by Kalasalingam University, **09-11 Jan., 2012.**

26. **D. Sinha** and A. Dhama, *Negation Switching Invariant Signed Graphs* in "National Conference on Modeling, Computational Fluid Dynamics and Operation Research" organized by Department of Mathematics, Birla Institute of Technology and Science, Pilani, **4-5 Feb, 2012.**

27. **D. Sinha** and A. Dhama, *Canonical-Sign-Compatibility of Some Signed Graphs* in "Eighth Annual Conference of Academy of Discrete Mathematics and Application (ADMA) and Graph Theory Day VIII" organized by Department of Mathematics, V.V.Vanniaperumal, **8-10 June, 2012**.

28. **D. Sinha** and P. Garg, *On the Splitting Signed Graphs,* **Presented** in "Eighth Annual Conference of Academy of Discrete Mathematics and Application (ADMA) and Graph Theory Day VIII" organized by Department of Mathematics, V.V.Vanniaperumal, **8-10 June, 2012**.

Invited Talks delivered
from 2010-2012 July

1. **Common edge Signed graphs**, 19th International conference of Forum for Interdisciplinary Mathematics, organized by Department of Statistics, Patna University, Patna-800005 held during Dec. 18-20, 2010.

2. **Limits of Functions**, Mini MTTS Programme, Number Theory and Algebra organized by Banasthali University, sponsored by National Board for Higher Mathematics Dec. 18-24, 2010.

3. **Common edge Signed graphs**, National-Conference, Mathematics Meet-2011, Department of Mathematics, Gujrat University, Ahmedabad, February 3-5, 2011.

4. **Three lectures on Basics of graph theory,** National Instructional Workshop on graph theory & its applications (WGTA-2011),Centre for Interdisciplinary Mathematical Sciences (CIMS) & Department of Computer Science, Banaras Hindu University, Varanasi-221005, May 23-28, 2011.

5. **Consistent signed graphs,** National Instructional Workshop on graph theory & its applications (WGTA-2011), Centre for Interdisciplinary Mathematical Sciences (CIMS) & Department of Computer Science, Banaras Hindu University, Varanasi-**221005, May 23-28, 2011.**

6. **Application of networks**, National Conference on Mathematical Modeling and Computer Simulation, Bhabha Group of Institutions, July 7-9, 2011.

7. **Unitary Cayley Graph and addition Unitary Cayley graph**, INTERNATIONAL CONFERENCE ON MATHEMATICS IN ENGINEERING & BUSINESS MANAGEMENT, STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI AND LOYOLA INSTITUTE OF BUSINESS ADMINISTRATION, CHENNAI, MARCH 9 - 10, 2012.

Annexure-5

Thesis supervised: M.Phil.

Sl. No.	Year	Name of Student	Brief Title	Sole/ Principal or Co supervisor
1	2009	**Ms. PriyaKataria**	The study of a sigraphs and Algo to convert a sigraph into other sigraph equation using some operator	Sole supervisor
2	2009	**Ms. Anju Rani**	Spectra and energy of Graphs	Do
3	2010	**Ms. AyushiDhama**	Studies on the balancing, minimal balancing and the minimum balancing processes with Planar and Nonplanar structures	Do
4	2010	**Ms. Shalini Jain**	Excursion through Arithmetic and graceful labeling of the graphs	Do
5	2011	**Ms. Anjali Singh**	Study of Algebraic Structures as graphs	Do
6.	2011	**Ms. Hina Sasaraswat**	Consistent marked graph and marked Signed graph	Do
7	2012	**Ms. Kumari Jyotsna**	Degree sequence of Graphs and signed Graphs	Do

Annexure-6

Thesis supervised: Ph.D.

Sl. No.	Year	Name of Student	Brief Title	Supervisor and Co supervisor if any
1	2011	Dr. Diksha Bhatia	*"New Frontiers Of Some Supply Chain Mode For Perishable Products With Variable Demand Rate"*	Self and Dr. S.R. Singh
2.	2011	Dr. Phool Singh	*"Numerical Computation of Heat and Mass Transfer Problems using Discretization Scheme"*	Self and Dr. N.S. Tomer
3	2012	Dr. PravinGarg	*An excursion to some emerging frontiers of the Theory of Signed graphs*	Sole
4	2012	Dr. NeerajTomar	*Evaluating machine translation Evaluation metrics for english to hindi language machine translation*	Sole
5	2013	Dr. JaspreetKaur	*An expedition to new Frontiers of friendly Labeling*	Sole
6	2014	Dr Pallavi Kharbanda	*Sufficiency and Duality in NonsmoothMultiobjective Programming Under Generalized Convexity*	Self and Dr Divya Agarwal
7	2014	Dr Ayushi Dhama	*Contributions to the Theory of Signed Graphs*	Sole
8	2014	Dr Anoop Vashishtha	*Study of some fuid flow problems using discretization Scheme and Homotopy analysis method*	Sole and NS Tomer
9	2014	Dr Ruchi Mathur	*Iinvestigation of certain new aspects of Fractional calculus operators and Geometric function theory*	Sole and Trilok Mathur
10	2016	Dr Ruchika Jain	*RESTRICTED THREE-BODY PROBLEM WHEN THE PRIMARIES ARE FINITE STRAIGHT SEGMENTS*	Sole and KB Bhatnager
11	2016	Anshu Sethi	<mark>EXCURSION OF GRAPH STRUCTURES</mark>	Sole

			THROUGH ALGORITHMS	
12	**2016**	**Ritu Kapoor**	ENHANCED ONE DIMENSIONAL MODELLING FOR PREDICTING BOD-DO CONDITIONS IN RIVER	Babita Tyagi, DS Bhargava, And sole.
13	**2018**	**Deepakshi Sharma**	Advances in Signed Graph Theoretic Structures and Models	Sole
14	**2018**	**Preeti Jain**	NUMERICAL COMPUTATION OF FLOW, HEAT AND MASS TRANSFER PROBLEMS IN NANOFLUIDS	Sole and NS Tomar
15	**2021**	**Anita Kumari Rao**	A Study of Signed Graph Structures and their Spectral Properties	Sole
16	**2022**	**Bableen Kaur**	Advances in the Study of Zero-Divisor Graphs and Spectrumof Graphs	Sole

Annexure- 7

List of courses taught in UG/PG level

1. Algebra
2. Linear Algebra
3. Vector Calculus
4. Trigonometry
5. Co-ordinate Geometry
6. Real Analysis
7. Statics
8. Dynamics
9. Statistics
10. Discrete Mathematics
11. Complex Analysis
12. Differential Geometry

13. Numerical Analysis
14. Mechanics
15. Integral transformation
16. Graphs and Networks
17. Advanced graph theory
18. Boolean Algebra and Applications