


Title	Dr.	First Name	Alka	Last Name		Photograph
Designation		Assistant Professor (Ad-hoc)				
Department		Mathematics				
Address (Campus)		Shyama Prasad Mukherji College for Women, University of Delhi, 52, North Ave, West Punjabi Bagh, Punjabi Bagh, Delhi 110026				
Contact Number		9718316525				
Email		alkamaths@spm.du.ac.in				
Education		Ph.D., M.Phil.				
Degree		Institution		Year		
Ph.D. Mathematics		University of Delhi		2023		
M.Phil. Mathematics		University of Delhi		2016		
M.Sc. Mathematics		Guru Jambheshwar University, Hisar		2013		
B.A. Mathematics		Maharshi Dayanand University, Rohtak		2009		
Research Interests/ Specialization						
Graph Theory, Functional Analysis						
Teaching Experience						

- Assistant Professor, Shyama Prasad Mukherji College, University of Delhi, (1<sup>st</sup> April, 2022- till Present)
- Assistant Professor, Shyama Prasad Mukherji College, University of Delhi, (28 January- 10 March, 2022).
- Assistant Professor, Shyama Prasad Mukherji College, University of Delhi, (January February, 2020)

## **Publications:**

### **Chapters in Edited Books :**

### **Research Papers in Journals**

1. P. Gupta, A. Goyal and R. Jain. Independent Point-set Dominating Sets in Graphs. AKCE International Journal of Graphs and Combinatorics, Vol. 17(1), 229-241, 2020, ISSN: 0972-8600, DOI: 10.1016/ j.akcej.2019.08.001. (SCIE, IF 0.86).
2. P. Gupta, A. Goyal and R. Jain. Independent Point-set Domination in Line Graphs, AKCE International Journal of Graphs and Combinatorics, Vol. 18(3), 180-185, 2021. ISSN: 0972-8600 , DOI: 10.1080 /09728600.2021.1995307 (SCIE, IF 0.86).
3. P. Gupta, A. Goyal and S. Arumugam. Line-set domination in graphs, Discrete Mathematics, Algorithms and Applications, Vol.15(5), ISSN: 1793-8309 , 2023 (<https://doi.org/10.1142/S1793830922501178>) (ESCI)
4. A. Goyal, L. Bandopadhyaya, and P. Gupta. Bounds of Point-set Domination Number. Communications in Combinatorics and Optimization, Vol.9(1), 79-87, 2024 (SCOPUS)
5. P. Gupta, A. Goyal. Secure point-set Domination in Graphs. Turkic World Mathematical Society Journal of Applied and Engineering Mathematics (ESCI) Vol.14(2), 605-617, 2024

## **Participation and Paper Presentation in International / National Conferences:**

1. Attended International Conference on “**Recent Trends in Mathematics and Its Applications to Graphs, Networks and Petri Nets**” and presented the paper entitled “**Independent Point-Set Dominating Sets in Graphs**” jointly organized by School of Computational and Integrative Sciences, JNU & Vijnana Parishad of India (Society for Applications of Mathematics).
2. Attended International Conference on “**Graph Labeling and Applications**” and presented the paper entitled “**Independent Point-Set Dominating Sets in Graphs**” organized by Department of Mathematics, Goa University, during September 17-19, 2020.
3. Attended “**International Conference on Graphs, Combinatorics and Optimization**” and **presented** the paper entitled “**Independent Point-Set Dominating Sets in Graphs**” organised by BITS Pilani, Dubai during February 06-08, 2022.
4. Attended the **UGC Sponsored National Seminar** on “**Applications of Mathematics in Social Sciences**” and **presented** the paper entitled “**Independent Point-Set Dominating Sets in Graphs**” organized by Department of Mathematics, Shyama Prasad Mukherji College for Women on 3-4th March 2022.

5. Attended International Conference on **“Graph, Networks and Combinatorics”** and presented the paper entitled **“Independent Point-Set Dominating Sets in Line Graphs”** organized by Department of Mathematics, Ramanujan College, University of Delhi, during January 10-12, 2023.

**Participation in Faculty Development Programmes:**

1. Participated in a one week Faculty Development Programme on **“ICT Integrated Research in Mathematical Sciences”** conducted by the Ramanujan Centre for Applied Mathematics and Research and the Teaching Learning Centre, Ramanujan College, University of Delhi from September 24-30, 2018.
2. Participated in a two weeks Faculty Development Programme on **“Managing Online Classes and Co-creating MOOCs”** conducted by the Ramanujan Centre for Applied Mathematics and Research and the Teaching Learning Centre, Ramanujan College, University of Delhi from April 20 – May 06, 2020.
3. Participated in the **R training** organized at Birla Institute of Technology Mesra, Noida Campus in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay. A comprehensive set of topics pertaining to R were covered in the training. This training is offered by the Spoken Tutorial Project, IIT Bombay, funded by the National Mission on Education through ICT, MHRD, Govt. of India.
4. Participated in one week online Faculty Development Programme (FDP) on **“Moodle Learning Management System”** organized by Atal Bihari Vajpayee University, Bilaspur in association with IIT, Bombay Spoken Tutorial (An Initiative of National Mission on Education through ICT, MHRD, Govt. of India) from 12 May, 2020 to 17May, 2020.
5. Participated in one week online Faculty Development Programme (FDP) on **“Latex and Xfig”** organized by IQAC, A. N. College Patna in association with IIT, Bombay Spoken Tutorial (An Initiative of National Mission on Education through ICT, MHRD, Govt. of India) from 11 May, 2020 to 17 May, 2020.
6. Participated in a two months Faculty Development Programme on **“Vedic Maths Mastry”** conducted by the Ramanujan Centre for Applied Mathematics and Research and the Teaching Learning Centre, Ramanujan College, University of Delhi from June 18 – September 11, 2022.

## **Innovative Projects :**

### **Awards**

### **Other Responsibilities:**

1. Organizing member of International Conference on “**Recent Trends in Mathematics and Its Applications to Graphs, Networks and Petri Nets**” jointly organized by School of Computational and Integrative Sciences, JNU & Vijnana Parishad of India (Society for Applications of Mathematics) during 20-24, July, 2020.
2. Co-convenor of the workshop on “Life skills” held on September 2, 2022 organised by Department of Mathematics and Department of Computer Science, Shyama Prasad Mukherji College, University of Delhi.
3. Member of organizing team in the Seminar on “Expanding the Domain of Indian Languages in Mathematics and Science” on November 18, 2022, jointly organized by Bharatiya Bhasha Samiti (Ministry of Education, GoI) and Shyama Prasad Mukherji College for Women, University of Delhi.
4. Worked as a member of the committee constituted to draft a syllabus for the course B.Sc. (H) Mathematics DSE-1(i): Graph Theory under NEP for University of Delhi in February, 2023.
5. Worked as a member of the committee constituted to draft a syllabus for the course DSE-2(ii) for 3-core discipline and DSC-4 for 2-core math major: Introduction to Graph Theory under NEP for University of Delhi in June, 2023.

Dr. Alka