




Faculty Details Proforma for Website

Name	Dr. Bhawna Kohli	Photograph	
Designation & Department	Assistant Professor		
Date of Joining the institution	Permanent 4-9-2023		
Date of Birth	3-9-77		
Address	House no 10587, Gali no 4, Pratap Nagar, second floor		
Phone No	Office		
	Residence		
	Mobile		9953327605
Email Address	bhawna_kohli@rediffmail.com		

Educational Qualifications		
Degree	Institution	Year
Phd(Maths)	University of Delhi	2014
MPhil(Maths)	University of Delhi	2004
M.Sc.(Maths)	University of Delhi	2001
B.Sc.(H)Maths	University of Delhi	1999
NET	CSIR	June, 2005
Administrative Assignments		
1) Member of Internal Assessment committee, P.G.D.A.V. College (2018-19, 2019-20, 2020-21, 2021-2022, 2022-2023)		
2) Member of Cultural committee, P.G.D.A.V. College (2018-19, 2019-20)		
3) Member of SAF committee, P.G.D.A.V. College (2016-17, 2021-22, 2022-23)		
4) Member of Canteen committee, P.G.D.A.V. College (2021-22)		
5) Member of Entrepreneurship cell- Diligentia, P.G.D.A.V. College (2021-22, 2022-23)		
(i) Project incharge- PROJECT SURBHI		
6) Member of Lawn and Garden committee, P.G.D.A.V. College (2019-20, 2020-21, 2021-22)		
7) Member of Time table committee, P.G.D.A.V. College (2022-23)		
8) Member of Stock Verification committee, P.G.D.A.V. College (2021-22, 2022-23)		



- 9) Workshop Coordinator for the One Day National Workshop on Vedic Mathematics organized by Department of Mathematics, P.G.D.A.V. College in collaboration with Shiksha Sanskriti Utthan Nyas, New Delhi held on 30th August 2022.
- 10) NAAC COMMITTEE- Criterion 5, P.G.D.A.V. College (Department representative and overall collator, 2021-22, 2022-23)
- 11) Member of Core Committee- Admissions, P.G.D.A.V. College (2019-20, 2020-21)
- 12) Member of College Website department profile updation, P.G.D.A.V. College (2023)
- 13) Apart from above I have contributed in various administrative activities of P.G.D.A.V. college.
- 14) Convenor, Workshop of Five Days National (Online) Workshop on Mathematical Modelling and Simulation organized by Department of Mathematics, Sri Guru Nanak Dev Khalsa College held from 13th -17th February 2024.
- 15) Member of Organizing Committee of Surlok-Annual Cultural Fest of Sri Guru Nanak Dev Khalsa College, 3rd -5th March 2024.

Areas of Interest / Specialization

Mathematical Programming, Nonsmooth Optimization

Subjects Taught

Numerical Analysis, Linear Programming, Real Analysis, Latex, R, Differential Equations, C++, Discrete Maths, Vedic Maths, Mechanics.

Research Guidance

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Publications Profile (Articles/ Books Published/ Books Edited)



1. S.K.Suneja and Bhawna Kohli, *Optimality and Duality Results for Bilevel Programming Problem Using Convexifactors*, **Journal of Optimization Theory and Applications**, 150, 1-19, 2011
2. Bhawna Kohli, *Optimality Conditions for Optimistic Bilevel Programming Problem Using Convexifactors*. **Journal of Optimization Theory and Applications**, 152, 3,632-651, 2012.
3. Bhawna Kohli, *Variational Inequalities and Optimistic Bilevel Programming Problem Via Convexifactors*, *Topics in Nonconvex Optimization*, **Springer optimization and its applications 50**, edited by **S. K. Mishra**, 243-254, 2011.
4. S.K.Suneja and Bhawna Kohli, *Generalized Nonsmooth Cone Convexity in terms of Convexifactors in Vector Optimization*, **Opsearch**, 50, 1, 89-105,2013.
5. S.K.Suneja and Bhawna Kohli, *Duality for Multiobjective Fractional Programming Problem Using Convexifactors*, **Mathematical Sciences**, 7:6,8 pages,2013.
6. S. K. Suneja and Bhawna Kohli, *Vector Variational Inequalities and their Relations With Vector Optimization*, **An International Journal of Optimization and Control: Theories and Applications(IJOCTA)**, 4, 1, 35-44, 2014.



7. Bhawna Kohli, *Sequential Optimality Conditions for Multiobjective fractional Programming Problems*, **Mathematical Sciences**, 8:128, 10 pages, 2014.
8. Kohli, B.: A Note on the paper “Optimality conditions for optimistic bilevel programming problem using convexifactors”, **Journal of optimization theory and applications**, 181, no. 2, 706-707, 2019.
9. Kohli, B.: *Necessary and sufficient optimality conditions using convexifactors for mathematical programs with equilibrium constraints*, **Rairo Operations Research**, 53(5), 1617-1632 (2019)
10. Bhawna Kohli: *Sufficient optimality conditions using convexifactors for optimistic bilevel programming problem*, **Journal of Industrial and Management Optimization**, 17(6), 3209-3221 (2020) doi: [10.3934/jimo.2020114](https://doi.org/10.3934/jimo.2020114)
11. Bhawna Kohli: *Optimality conditions using convexifactors for a multiobjective fractional bilevel programming problem*, **Tamkang Journal of Mathematics** 54(1), 21-41, 2023.
12. Bhawna Kohli: *Approximate optimality conditions for a multiobjective programming problem*, **Soft Computing and Optimization**, Springer, 2022. [Springer Proceedings in Mathematics & Statistics](#) 404, 183-192.

Conference Organized

1. Convenor, Workshop of Five Days National (Online) Workshop on Mathematical Modelling and Simulation organized by Department of Mathematics, Sri Guru Nanak Dev Khalsa College held from 13th -17th February 2024.
2. Workshop Coordinator for the One Day National Workshop on Vedic Mathematics organised by Department of Mathematics, P.G.D.A.V. College in collaboration with Shiksha Sanskriti Utthan Nyas, New Delhi held on 30th August 2022.
3. Member of organising committee for 15 days (online) Certificate Course on ‘Statistical Concepts and Ordinary Differential Equations in R’ organised by Department of Mathematics and IQAC, P.G.D.A.V. College, University of Delhi from 26th July - 12th August, 2021.
4. Member of organizing committee of Blockchain Webinar organized by Department of Mathematics and Department of Computer Science and IQAC, P.G.D.A.V. College held on 11th November 2021.
5. Member of organising committee of “National Conference on Advances in Mathematical Analysis and its Applications” organised by Department of Mathematics, P.G.D.A.V. College, University of Delhi held from 8-10th November, 2019.

Research Projects (Major Grants/Research Collaboration)

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Awards and Distinctions



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Association With Professional Bodies

Member of Working Group of Generalized Convexity(WGGC)

Seminars/Webinars/Conferences /Workshops Attended

Paper Presentations

1. Presented paper “Nonsmooth Cone Convexity in Terms of Convexifactors and its Generalizations in Vector Optimization” in RAOTA- 2006, October 27-28, University of Delhi, 2006.
2. Presented paper “Optimality and Duality Results for Bilevel Programming Problem Using Convexifactors” in 40th Annual convention of Operational Research Society of India during December 04-06, University of Delhi, 2007.
3. Delivered a talk on “Optimality and Duality in Vector Optimization” in Research Scholar’s Seminar, March 31- April 2, Department of Mathematics, University of Delhi, 2008.
4. Presented paper “Optimality Conditions for Optimistic Bilevel Programming Problem Using Convexifactors”, International Conference on Optimization and Its Applications, February 16-18, Banaras Hindu University, 2010.
5. Presented paper “ Vector Variational Inequalities and Their Applications in Vector Optimization” in International Conference on Optimization Modelling and Applications, November 29-December 01, University of Delhi, 2012.
6. Presented paper “Duality For Multiobjective Fractional Programming Problem Using Convexifactors” in International Symposium on Applied Optimization and Game – Theoretic Models during January 9-11, ISI Delhi, 2013.
7. Presented paper “Optimality Conditions for Multiobjective Fractional Bilevel Programming Problem Using Convexifactors” in 49th Annual Convention of the Operational Research Society of India and International Conference on Analytics in Operational Research, December 12-14, held at Birla Institute of Management Technology, Greater Noida, 2016.
8. Presented paper “Sufficient Optimality Conditions for Optimistic Bilevel Programming Problem Using Convexifactors” in 2017 Symposium on Mathematical programming Problem and Game Theory during January 9-11, ISI Delhi, 2017.
9. Presented paper “ Mathematical Programs with Vanishing Constraints: stationary conditions using convexifactors” in 52nd Annual Convention of the Operational Research Society of India & International Conference during December 15-18, IIM Ahemdabad, 2019.
10. Presented paper “Approximate optimality conditions for mathematical programs with equilibrium constraints via ε – convexifactors” in the Indo-French Seminar on Optimization, Variational analysis & Applications(IFSOVAA-2020) held during February 02-04, at the Department of Mathematics, Institute of Science, Banaras Hindu University, Varanasi, India, 2020.
11. Presented paper “Approximate optimality conditions via convexifactors for multiobjective programming problems” in a virtual international conference on soft computing, optimization theory and applications (SCOTA 2021) organised by Birla Institute of Technology, Mesra from 26th-27th March 2021.
12. Presented paper “Some calculus rules, generalized convexity via convexifactors and their applications to optimization” in an online international symposium on computational operations research and algorithmic game theory organised by Indian Statistical Institute,



Delhi from 29th-31st March 2021.

13. Presented paper “Optimality Conditions for a Multiobjective Bilevel Programming Problem” in the 3rd International Conference on Mathematical Modeling, Computational Intelligence Techniques and Renewable Energy (MMCITRE-2022) organized during March 04-06, 2022 conducted by the University of Technology Sydney(UTS), Pandit Deendayal Energy University (PDEU), Universidad Autónoma de Baja California (UABC), Mexico, Universidad Católica de la Santísima Concepción (UCSC), Chile, Forum for Interdisciplinary Mathematics(FIM) and Victoria University, Melbourne, Australia (Virtual).
14. Presented paper “Duality for Mathematical Programs with Equilibrium Constraints” in the International Conference on Advances in Pure and Applied Mathematics (ICAPAM) organized by the Department of Mathematics, Shyam Lal College, University of Delhi held during 8th-10th February, 2024.

Participation in Workshops/Conferences/Seminars

1. Participated in Workshop on Optimization and it's Applications during November 29-December 03, Delhi, 2007.
2. Attended International Conference on Modelling, Computation and Optimization(ICMCO 2008), January, 9-10, ISI, Delhi, 2008.
3. Participated in Research Workshop in Optimization Theory and Applications, in September 3-6, I.I.T. Kanpur, 2008.
4. Participated in Research Scholar's Seminar, January 22-23, Department of Mathematics, University of Delhi, 2009.
5. Participated in the Advanced Training Programme on Nonconvex Optimization and It's Applications, March 22-26, Banaras Hindu University, 2009.
6. Participated in 8th triennial conference of Association of Asian Pacific Operational Societies (APORS), December 6-9, Jaipuria Institute of Management, Jaipur, 2009.
7. Participated in the Training Programme on Optimization Theory and Applications, February, 10-14, Department of Mathematics, University of Delhi, 2010.
8. Participated in the National Seminar for Research Scholars held at Department of Mathematics, March 24-25, University of Delhi, 2012.
9. Participated in Training Program on Optimization and Its Applications, November 26-December 01, University of Delhi, 2012.
10. Participated in CIMPA- ICPAM Research School, November 25- December 06, University of Delhi, 2013.
11. Participated in the National Seminar on Optimization and It's Applications organized by Department of Mathematics, Lakshmibai College, University of Delhi, January 15-16, 2015.
12. Participated in the International Conference on Recent Advances in Optimization Theory and applications, RAOTA-2016, January 30-31, University of Delhi, 2016.



Teaching Based

1. Participated in one day workshop on MATHEMATICA, South Campus, University of Delhi, December 8th, 2010.
2. Participated in the workshop on Free/open Source software “MAXIMA”, Department of Mathematics, Acharya Narendra Dev College, University of Delhi, March 1st, 2013.
3. Participated in the workshop on MATHEMATICA, Department of Mathematics, Acharya Narendra Dev College, University of Delhi, August 17, 2012.
4. Participated in the workshop on LaTeX and HTML, Department of Mathematics, Janki Devi Memorial College, University of Delhi, October 7-8, 2016.
5. Participated in the workshop on LaTeX and HTML, Department of Mathematics, Acharya Narendra Dev College, University of Delhi, August 27, 2016.



Other Activities (FDP's/Refresher Course)

1. "MANAGING ONLINE CLASSES and CO-CREATING MOOCS: 2.0" from May 18 - June 03, 2020 organized by Teaching learning centre Ramanujan College, University of Delhi.
2. Two Week Online Workshop on "Comprehensive e-Learning to e-Training guide for Administrative Work" from May 25 - June 05, 2020 organized by Teaching learning centre Ramanujan College, University of Delhi.
3. One Week Faculty Development Programme on "Open Source Tools for Research" from June 08 - June 14, 2020 organized by Teaching learning centre Ramanujan College, University of Delhi.
4. Two Weeks Faculty Development Programme on "ADVANCED CONCEPTS FOR DEVELOPING MOOCS" from July 02 - July 17, 2020 organized by Teaching learning centre Ramanujan College, University of Delhi.
5. Two week Faculty Development Programme on "BLENDED LEARNING: ALTERNATIVE DIMENSIONS" from 12 January, 2021 - 29 January, 2021 organized by Teaching learning centre Ramanujan College, University of Delhi.
6. Webinar Series(Professional) on "Transforming Teaching-Learning Process using ICT Tools ICT Tools" organized by P.G.D.A.V. College, University of Delhi, from 28th to 30th August, 2020.
7. Webinar Series(Basic) on "Transforming Teaching-Learning Process using ICT Tools" organized by IQAC, P.G.D.A.V. College, University of Delhi, from 23rd to 25th July, 2020.
8. Two week (Online) Faculty Development Programme on "BIOMATHEMATICS" (15th October -28th October, 2020) organized by Department of Mathematics, P.G.D.A.V. College, University of Delhi in collaboration with Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi.
9. 15 days (online) Certificate Course on "Statistical Concepts and Ordinary Differential Equations in R" (26th July - 12th August, 2021) Organised by Department of Mathematics and IQAC, P.G.D.A.V. College, University of Delhi
10. One week (online) Interdisciplinary Faculty Development Programme on " Applications of Mathematics on Business and Social Sciences" (18th March-24th March 2021) organised by Department of Mathematics & IQAC, Miranda House, University of Delhi in collaboration with Mahatma Hansraj Faculty Development Centre, Hansraj College, University of Delhi.
11. Four Week Faculty Induction/Orientation Programme for "Faculty in Universities/Colleges/Institutions of Higher Education" organized by TLC, Ramanujan College, University of Delhi in collaboration with K.M. Mayawati Govt Girls P G College, Badalpur, GB Nagar, Uttar Pradesh from 22nd October-23rd November 2023.
12. "Foundation Course in Vedic Mathematics" organized by TLC Ramanujan College, University of Delhi during 31st March-13th April 2024.

Past experience (If any, Give details)



1. Assistant Professor (ad hoc), P.G.D.A.V. College, University of Delhi from 5th August 2006-27th February 2023. as Assistant Professor (ad hoc), P.G.D.A.V. College, University of Delhi
2. Assistant Professor (Guest), Shivaji College, University of Delhi from 23rd March 2023-3rd September 2023.