

Curriculum Vitae

Name Dr. KALPANA SHUKLA

Current Designation: Assistant Professor,
Department of Mathematics,
Zakir Husain Delhi College(Evening), University of
Delhi (November 18,2022 To Till Date)

PERSONAL INFORMATION



Father's Name Shri Kashi Nath Shukla
Mother's Name Smt. Asha Shukla
Husband's Name Mr. Shailendra Kumar Dubey
Date of Birth 25 July, 1983
Gender Female
Married/Unmarried Married
Nationality Indian
Contact No. 8853802932 , 6397878085
Email Address kalpana@zhe.du.ac.in;
bhukalpanabhu@gmail.com

Permanent Address:

SA 10/65, A-25, Ganj, Sarnath, Buddh Nagar, Varanasi-221007,
U.P, India

Past Employment details:

- 1. Designation: Assistant Professor in Manav Rachna University, Faridabad**
In Mathematics Department,
December 05, 2019 To November 17, 2022
- 2. Designation: Assistant Professor in Mathematics Department**
Applied Science and Humanities,
GLA University, Mathura (Uttar Pradesh)
July 31, 2014 to December 04, 2019

Courses Taught:

M.Sc. (4th Semester) Mathematical Modeling (2020)
B.C.A. (5th Semester) Operation Research (2018-19)
B.Tech. (3rd Semester) Mathematics III (2016-17)

B.Tech. (6th Semester)-Optimization Technique
**B.Tech. (4th Semester) CBNST, Complex Analysis/
 Numerical Methods/Differential Eq.**
B.Sc. (Ist Semester) - Calculus (During PDF 2012-13)
B.Sc. (4th Semester)- Partial Differential Equation (During PDF 2012-13)

Currently Teaching Subject:

Course	Branch	Subject
M.Sc.(3 rd Sem)	Mathematics	Operations Research
B.Sc.(B.Ed.) (5 th Sem)	Education	Differential Equation
BBA/B.Com.(Law)	Law	Business Mathematics
BBA/B.Com.	Management	Business Statistics

Post Research Experience :

Post Doctoral Fellowship : National Board For Higher Mathematics ,Department of Atomic Energy (NBHM) ;Since 1 October 2010 To 30 September 2013, Joined In Department Of Mathematics, Banaras Hindu University, India

Doctoral Degree (Ph.D) (OPTIMIZATION)

Thesis Title: Some Contributions to Minimax Programming Problems Involving Generalized Convexity (2010)

(Department of Mathematics, Banaras Hindu University, Varanasi)

Under the Supervision Of: Professor Shashi Kant Mishra

ACADEMIC RECORD

Year	Examination Passed	Name of Institution	University/Board	Subjects offered
2004	(Post Graduation) M.Sc.	Department Of Mathematics, Banaras Hindu University, Varanasi	Banaras Hindu University, Varanasi, India	Mathematics
2002	(Graduation) B.Sc. (Math Hons.)	Mahila Maha Vidyalaya,	Banaras Hindu University, Varanasi, India	Math, Physics, Chemistry,
1999	12th	Government Girls Inter College, Varanasi	Uttar Pradesh Board	Math, Physics, Chemistry, Hindi, English,

1997	10th	Government Girls Inter College, Varanasi	Uttar Pradesh Board	Math, Biology, Science, Hindi, English, Social Science,
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FELLOWSHIP:

■ Post Doctoral Fellowship in National Board For Higher Mathematics, Department Of Atomic Energy, Government Of India

Book Chapter On Sufficient Optimality Conditions for Semi-Infinite Discrete Minmax Fractional Programming Problems Under Generalized V -Invexity, (Topics in nonconvex optimization, Springer optimization and its Applications, Volume 50, 2011, chapter -9, pp 133)

International Publications:

- 1) Nondifferentiable Generalized Minimax Fractional Programming Under (Φ, ρ) -Invexity, Yugoslav Journal of Operations Research, DOI: <https://doi.org/10.2298/YJOR200915018U>.
- 2) Higher order duality for a new class Of nonconvex semi-infinite multiobjective fractional programming with support functions, Journal of applied analysis and computations, vol.10, no,6, Dec 2020. (SCI Indexed)
- 3) On Vector Variational Inequalities and E -Pseudoconvex Multiobjective Programming Problems , PanAmerican Mathematical Journal, 28(2018), Number 3, 94 – 103 .(SCOPUS)
- 4) Minimax Fractional Integral Programming Problems Involving Univexity (2012) (Dynamics of Continuous, Discrete and Impulsive Systems,

Series A: Mathematical Analysis 18, 335-355) (SCOPUS)

5) Nonsmooth minimax programming problems with $V-r$ -invex functions (January 2010) (Optimization, Vol. 59, No. 1, pp. 95-103). (WoS & SCOPUS))

URL:

<https://www.tandfonline.com/doi/abs/10.1080/02331930903500308?journalCode=gopt20>

6) Nonlinear multiple objective Fractional Programming Involving Semi-Locally Type $I-\alpha$ -Preinvex and Related Functions (2009) (PanAmerican Mathematical Journal, Vol. 19, No. 3, pp. 51-67). (SCOPUS)

7) Minimax Fractional Programming Involving Type I and Related Functions (2009) (International Journal of Operations Research, Vol. 6, No 2, pp. 45-54). (Referred)

8) Optimality and duality for nondifferentiable multiobjective programming under generalized α -univexity (2009) (Analele Universitatii Bucuresti, Mathematica Anul LVIII, pp. 239-252). (Referred)

Other Roles & Responsibilities :

Subject Coordinator:

- 1) Advanced Operations Research (M.Sc.)
- 2) Ordinary Differential Equation & Numerical Methods (B.Tech (EC))
- 3) Mathematical Modelling and Simulations

Ongoing/Completed Departmental Project /Doctoral Guide:

B.Sc. III Yr (04) Student

Ph.D. Guiding: (01) Student

Paper setting:

In university courses:

- **Optimization Technique**
- **Engineering Mathematics**
- **Discrete Mathematics**
- **Ordinary Differential Equation**
- **Real Analysis**

Computer Programming Certificates:

- Summer School of Computing 2008
- LATEX and other Open Source Software (DST Centre for Interdisciplinary

Mathematical Sciences)

Computer Languages:

- | | | |
|-----------|------------|------------------|
| 1. MATLAB | 2. FORTRAN | 3. C |
| 4. C++ | 5. OCTAVE | 6. R Programming |

Convener:

Workshop on Nonlinear Optimization, Variational Inequalities and Artificial Intelligence, March 22-16, 2021, Department of Mathematics, Manav Rachna University, Faridabad.

Talk:

Entitled

“Lagrange’s Multipliers and KKT Conditions”

Workshop on Nonlinear Optimization, Variational Inequalities and Artificial Intelligence, March 22-26, 2021, Department of Mathematics, Manav Rachna University, Faridabad.

Membership

1. Working Group On Generalized Convexity (WGGC)
2. International Society On Multiple Criterion Decision Making
3. The Continuous Optimization Working Group of EURO

Workshop(s)/Conference(s) attend/Paper Presentation

- Attended webinar “ Vedic Mathematics Webinar” 17-23 November 2020, Banaras Hindu University.
- Workshop attended on “Recent Trends in Convex Optimization Theory, Algorithms and Applications”, IIT PATNA, 29-31 October 2020
- 5 days **Online** Faculty Development Program on Introduction to Data Science, 18 May, 2020 to 22nd May, 2020 . Computer of Science and Engineering, Guntur Engineering College.
- National Level Faculty Development Program on Tools for **online** Classrooms Post Covid-19 From 18 May 2020 to 20 May 2020, Department of computer science P.B. Siddhartha College of Arts & Science and Computer Society of India-Vijayawada
- Passes Quiz on Research Methodology, Department of Mathematics, Keral Verma Subharti College of Science, Swami Vivekanand Subharti University, Meerut on 16 May 2020.
- **Paper presentation** in Indo-French Seminar On Optimization, Variational Analysis and Applications on “E-b- Optimality conditions and E-b-Type duality for E-b-Differentiable vector optimization problems with inequality and equality constraints”

in Department of Mathematics, Banaras Hindu University, Varanasi-India, 02-04 Feb 2020.

■ **Paper Presentation** in International Conference on Gravitation, Cosmology and Mathematical Physics (ICGCAMP-19) on “Optimality and duality for non differentiable multiobjective variational control problems with $(F, \alpha, \rho, \theta)$ -V convexity” April 04-07, 2019, GLA University Mathura.

■ **Paper Presentation** On FIAM 2018 “ Vector Variational Inequalities and E-Pseudoconvex Multiobjective Programming Problems” April 25-26, 2018, Department Of Mathematics, National Institute Of Technology, Hamirpur, Himanchal Pradesh.

■ Workshop Attended, International Workshop on Convex Analysis and Optimization (IWCAO-2017), November 14-19, 2017, Department Of Mathematics, Aligarh University

■ **Paper Presentation** On 2017 Symposium on Mathematical Programming and Game Theory “Properties of generalized Nondifferentiable Multiobjective Variational Control Problems With Generalized Convexity With its Applications” on January 09-11, 2017, Indian Statistical Institute, New Delhi.

■ **Paper Presented** in “VIII International Symposium on Statistics and Optimization in conjunction with XXXVI-Annual Convention of Indian Society for Probability & Statistics (ISPS) & Seminar on Statistical Inference, Sampling and Optimization Techniques & Related Areas (Under SAP-DRS-II)” Entitled “Sufficiency and duality for Non-Differentiable Multiobjective Variational Control Problems with generalized Convexity with support functions” in Aligarh Muslim University, 17-19, December 2016.

■ Short term course on Advanced Operation Research in National Institute of Technical Teachers Training and Research (NITTTR), 07-11 November, 2016, Chandigarh

■ Short Term Course “Achedamic Communications for Teachers” 05-15 October 2016, GLA University Mathura.

■ Workshop attend On Fractional Calculus and Its Applications (FCA-2016), September 2-3, 2016, Department of Mathematics, Applied Science and Humanities, GLA University

■ Round Table Conference on Mathematical Formalism On Relativistic Cosmology , August 26-27, 2016, Department of Mathematics, Applied Science and Humanities, GLA University

■ **Paper presentation** entitled “Optimality and Duality of Variational Programming Problems” in Workshop on Applied Optimization Models and Computation Held on 28-30, January 2015 in Indian Statistical Institute, New Delhi.

■ **Paper Presentation** entitled “ Multiobjective Variational Problems Involving Generalized Higher Order Functions” in ICOTA 9 Conference Held on 12-16 December 2013 At the **National Taiwan University of Science and Technology, Taiwan Republic of China.**

■ CIMPA-UNESCO-INDIA Research School 2013-Generalized Nash Equilibrium Problems, Bilevel Programming and MPEC, November 25 to December 6, 2013.

■ Advanced Training Programme On Nonlinear Functional Analysis and its Applications (ATP-NFAA). DST-Centre for Interdisciplinary Mathematical Science, Banaras Hindu University, Varanasi, 04-10 March, 2013.

■ **Paper Presentation** entitle “Optimality and Duality For Nondifferentiable multiobjective fractional programming problems ”, (OPTIMA-2012) International Conference on Optimization Modeling and Applications, Departmental Of Operational Research, University of Delhi , November 29-December 01, 2012.

- Training Programme on Optimization and Its Applications, Department of Operational Research University of Delhi, Delhi, November 26-December 01, 2012.
 - Symposium on “Indian Women and Mathematics”, The Institute Of Mathematical Sciences, Chennai, January 8-10, 2012.
 - **Paper Presentation** entitle “Nonsmooth Minimax Programming Problems V-r Invex Function”, International Conference on Game Theory and Their Applications, Indian Statistical Institute, Chennai Centre, 5-7 January 2012.
 - Advanced Training Programme on Optimization and its Applications (ATPOA), DST, Centre for Interdisciplinary Mathematical Sciences, Banaras Hindu University, Varanasi, November 23-29, 2011.
 - National Instructional Workshop On Graph Theory And Its Applications, DST, Centre for Interdisciplinary Mathematical Sciences, Banaras Hindu University, Varanasi, May 23-28, 2011.
 - Satellite Conference On International Congress of Mathematicians 2010, ISIAM And Sharda University, 14-17 August 2010.
 - International Conference on Optimization and Its Applications (Department of Mathematics) Banaras Hindu University, INDIA, Feb 16-18, 2010.
 - Optimization Theory and Applications (Training Programme), Department of Mathematics, University of Delhi, INDIA, February 10-14, 2010.
 - Advanced Training Programme on Nonconvex Optimization And Its Applications (DST-Centre for Interdisciplinary Mathematical Sciences), Banaras Hindu University, INDIA, March 22-26, 2009.
 - Optimization and its Applications (Training Program), Banasthali University, Centre for Mathematical Sciences, INDIA, December 24-29, 2008.
 - BHU Summer School of Computing (BHU-SSC08), Department Of Physics, Banaras Hindu University, Varanasi, April 07 to April 19, 2008.
 - National Conference on Modern Analysis and Allied Areas, (UGC-DRS Programme), Banaras Hindu University, INDIA, Feb 23-24, 2007.
 - xxiii Annual Conference of The Mathematical Society, Banaras Hindu University, INDIA. December 30-31, 2008
 - xxiv Annual Conference of The Mathematical Society, Banaras Hindu University, INDIA. December 29&30, 2007.
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Area Of Interest:

1. Optimization
2. Nonsmooth Analysis
2. Multiobjective Optimization
4. Goal Programming

References:

<p>1.Dr. Shashi Kant Mishra (Professor) Department Of Mathematics, Banaras Hindu University, Varanasi (U.P.) India Email : bhu.skmishra@gmail.com</p>	<p>Professor, Department of Mathematics Institute of Applied Sciences and Humanities, GLA University NH - 2, Mathura-Delhi Road P.O. Chaumuhan Mathura - 281406, U.P., India</p> <p>Email: anirudh.pradhan@gla.ac.in</p>
<p>3. Pierre Maréchal(Professor)</p>	<p>4. Fabian Flores B Bazan(Professor)</p>

Mathematical Institute of Toulouse Université Paul Sabatier 31 062 Toulouse Cedex 9 France Email:pr.marechal@gmail.com	University of Concepcion Faculty of Physical and Mathematical Sciences , Department of Mathematical Engineering Casilla 160-C, Concepción, Chile Email: fflores@ing-mat.udec.cl
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Declaration: I hereby declare that all the above information are true and correct to the best of my knowledge and belief.

Kalpana Shukla

Dr. Kalpana Shukla

Varanasi