Name: Prof. Umesh Kumar Gupta
Designation: Professor
College: Mahatma Gandhi Post Graduate College, Gorakhpur

Department: Mathematics
Phone: 9451644220, 08887945243
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Date of Joining: 25 April 2005

Educational Qualifications:

- 2002 Ph.D. Mathematics, Gorakhpur University, Gorakhpur
- 1996 M.Sc. Mathematics, Gorakhpur University, Gorakhpur
- Ph.D. Thesis Title *"Mathematical Modeling in Industry"*

Research Experience: Twenty Six Years

Teaching Experience: Twenty One Years

Academic Positions:

- 2001-2005 Lecturer (Part Time), Department of Mathematics, St. Andrews College, Gorakhpur.
- 2005-2009 Assistant Professor (Stage –I, AGP 6000), Department of Mathematics, Mahatma Gandhi Post Graduate College, Gorakhpur.
- 2009-2014 Assistant Professor (Stage –II, AGP 7000), Department of Mathematics, Mahatma Gandhi Post Graduate College, Gorakhpur.
- 2014-2017 Assistant Professor, Depart (Stage –III, AGP 8000) ,Department of Mathematics, Mahatma Gandhi Post Graduate College, Gorakhpur.
- 2017 to 30 September 2021 Associate Professor, Department Of Mathematics, Mahatma Gandhi Post Graduate College, Gorakhpur.
- 01 November 2021 Continue Working as Professor in the Department Of Mathematics, Mahatma Gandhi Post Graduate College, Gorakhpur

Field of Specialization Interest:

Mathematical Modeling, Operation Research, Fluid Dynamics, Rigid Dynamics; Differential Equations.

Research Supervisor:

S.No.	Number of Research Scholar	Ph.D.	Department and University	Status
1	01	Ph.D.	Department of Mathematics, Himalayan University, Itanagar, Arunachal Pradesh.	Awarded 2021
2	01	Ph.D.	Department of Mathematics and Statistics , D. D. U. Gorakhpur University Gorakhpur ,U.P.	Pursuing

Research Publications:

1. Fourier series and its Physical Applications – A Study, *Journal of Ultra Scientist of Physical Sciences* 34(2), (2022), 28-41.

2. An approach to operation research techniques and constraint programming, *International journal of innovative research technology 8(6),* (2022), 525-535,

3. Rtl realization of square root methods for arithmetic logic, *International journal of creative research through,* (2021), 818-826.

4. Determination of Eigen values of linear circuits based on characteristics equations and standard linear electrical circuits , *International Journal of Statistics and applied Mathematics* 5(1) *,* (2020), 76-85

5. A study of operation research solution techniques in combinatorial problem towards constraint programming, Journal *of advanced and scholarly research in allied education,* (2019), 2046-2051.

6. A study of solution combinatorial of new product using constraint programming planning and simulation, *Journal of advanced and scholarly research in allied education,* (2019), 2948-2954.

7. An overview study on applications of graph theory in computer science, *Journal of advanced and scholarly research in allied education,* (2019), 1600-1606.

8. A study on mathematical modeling and social care application, *Journal of advanced and scholarly research in allied education,* (2019), 1595-1599.

9. An empirical mathematical study of mobile phone subscribers in India, International Journal of Statistics and applied Mathematics, 3(2) (2018), 688-690.

10. Mathematical modeling of social media using graph theory, J. Nat.Acad.Math.32, (2018), 38-44.

11. Diffusion model of telecommunication for multiple sizes of light emitted diode television, J. Nat. Acad. Math., 30 (2017), 5056.

12. A competitive mathematical modeling of technological innovation diffusion, International Journal of Statistics and applied Mathematics, 2(5), (2017), 104-107.

13. A study of mathematical modeling and predicting the current trends of human population, International Journal of Statistics and applied Mathematics, 2(6), (2017), 65-67.

14. An approach to mathematical modeling of mechanical and electrical systems and engineering, International Journal of Statistics and applied Mathematics, 2(4), (2017), 52-56.

15. Mathematical model that incorporate inter-product category and technological substitution effects simultaneously, J. Nat. Acad. Math. (30), (2016), 50-56.

16. A study of variable energy in magneto gas dynamics, International Journal of applied research

    2(4), (2016), 674-676

17. An analysis for the Cobb – Douglas production function in general form International Journal of applied research, 2(4), (2016), 96-99.

18. Determination of eigenvalues of linear electrical circuits with characteristics equations, International Journal of Statistics and applied Mathematics, 1(5), (2016), 40-48

19. A study of role of marketing variables in technological innovation diffusion, Journal of progressive science, 4(2), (2015), 40-48.

20. Mathematical modeling of physical and hydraulic system with engineering, International Journal of Statistics and applied Mathematics 1(5), (2016), 31-36.

21. A qualitative analysis of technological innovation diffusion, International journal of applied research 1(5), (2015), 289-295.

22. Mathematical model that incorporate inter product category and technogical substitution effects simultaneously, International journal of applied research 1(1), (2014), 435-440.

23. The effect of external influences in innovation diffusion models, Journal of progressive science, 4(2), (2013), 178-182.

24. A study of dynamic logistic model for fishing industry, Journal of progressive science, 3(1), (2012), 134-138

25. A study of mathematical models of production functions, South East Asian J. Math. and Sc. 3(1), (2003), 67-74

Book Publications:

1. A text book of Differential Equation and Laplace transformation, Krishna Prakashan media (P).
2. A text book of Advanced Calculus, Kedar Nath Ram Nath Meerut, 2019
3. A text book of Differential Equation and Laplace transformation, Krishna Prakashan media (P).
4. A Text Book of Integral Calculus, S.J. Publications Meerut, 2022
5. A Text Book of Integral Geometry, S.J. Publications Meerut, 2022
6. Book chapter Boolean Algebra and Digital Logics, Akinik Publications Rohini Delhi 110085
7. A text book Analytical Geometry and Vector Calculus, Kedarnath Ram Nath Meerut, 2019
8. A text book Algebra and Trigonometry, Kedarnath Ram Nath Meerut, 2019
9. A text book of Differential Equation and Laplace transform, Ankita Publication Buxipur Gorakhpur, 2019
10. A Text Book of Statistics, Ankita publication Buxipur Gorakhpur, 2019
11. A text book of Differential Equations, Neel Kamal Prakshan, 2018
12. A text book of Mechanics, Neel Kamal Prakshan, 2017
13. A text book of Complex Variables and Calculus of Variation, Neel Kamal Prakshan, 2014
14. A text book of Advanced Calculus and Numerical Analysis, Vandana Prakashan Mahaanlpur, 2017
15. A Text book Mechanics, Neel Kamal Prakshan, 2013
16. A text book of abstract algebra, Ankita Publication Buxipur Gorakhpur, 2017
17. A text book Real analysis, Krishna Publication, Meerut, 2017
18. A text book of Complex Variables and Calculus of Variation, Manglam Publisher and Distributors, Delhi

Life Membership:

1. Indian Mathematical Society
2. National Academy of Mathematics
3. Bharat Granit Parishad
4. International Sciences Congress Association
5. Indian Society of Mathematics and Mathematical Sciences

Administrative Experience:

1. Worked as N.S.S. program officer
2. Worked as Chief proctor
3. Worked as assistant centre superintendent in annual exams
4. Worked as student union election officer
5. Convener of flying squad, in annual examination (2015) D.D.U. University Gorakhpur
6. Convener of flying squad, in annual examination (2022) D.D.U. University Gorakhpur

Invited Talk:

1. Integer programming problem and game theory, Shri Ramanujan birthday Mathematics Day, Department of mathematics M.P.P.G. College Jangal Dhushan, 19/12/2019.
2. Scope of operation research, Mathematics Day, Department of mathematics M.P.P.G. College Jangal Dhushan, 20/12/2018.

Paper Presented on Conferences:

1. An analysis of logistic model for fish harvesting, International conference on algebra and applied analysis, Department of mathematics integral university Lucknow August 9-11, 2018.
2. Geometric programming and its application in production function, National conference on Ramanujan :A Goddess gifted Mathematician, Ramanujan society of mathematics and mathematical sciences and Department of mathematics ,T.D.P.G. College, Jaunpur October 30-31, 2017
3. Diffusion models of mobile technology in India, Discrete mathematics, theoretical computer science, computer engineering and applications, Ramanujan society of mathematics and mathematical sciences and Department of mathematics, T.D.P.G. College, Jaunpur October 28-29. 2017
4. A study of mathematical models for demands of luxury goods in India, Science technology and innovations for sustainable development, 4^{th}Lucknow Science Congress LUSCON-2017 B. B. A. U. Central University Lucknow 3rd and 4th March 2017
5. A study of ……for protein structure, Structure and dynamics of bimolecular, Department of physics .D.D.U.G. University Gorakhpur January 27-28, 2017
6. Magneto gas dynamic plane shock in three dimensional flow, Differential analysis, Bharat Ganita Parisad and Department of Mathematics and Astronomy University of Lucknow 19th-20th December 2016
7. A diffusion theory model in competitive growing market , Treasures of great Indian mathematician Srinivasa Ramanujan, Ramanujan society of mathematics and mathematical sciences and Department of mathematics ,T.D.P.G. College , Jaunpur 03-07, 2016.
8. Diffusion theory model …for growing market, Recnt trends of research in mathematics and applications in diverse fields, Ramanujan society of mathematics and mathematical sciences and Department of mathematics ,T.D.P.G. College , Jaunpur, November 03-05 ,2016
9. Demonstrated hands on experiment in the Inspireship camp and interacted it successfully, INSPIRE INTERNSHIP CAMP, Mahatma Gandhi P. G. College Gorakhpur,13th-17th October 2016
10. Applying the Bass model to forecast the number of 4G Users In India, Recent trends in Mathematical Sciences, Department of Mathematics and statistics D. D. U. Gorakhpur University Gorakhpur 23-24 July 2016.

11. Optimizing the geometric programming, Recent trends in Mathematical Sciences, Department of applied Science, M. M. M. University of Technology, Gorakhpur April 12-13, 2016.

12. An analysis for the Cobb- Douglas production in general form, Mathematical techniques in engineering and technology, Department of applied mathematics ,school of physical sciences, 30-31, march 2016

13. Mathematical approach towards earthquake, National seminar in Earthquake ,cause and Remedy, M.G.P.G. College Gorakhpur and Vasudha Nidhi Sansthan , Gorakhpur 18th-19th March 2016

14. Mathematical model for Multigenerational diffusion, National conference on advances in mathematical sciences and applications in engineering and technology, Poornima University, Jaipur, July 25-26, 2015

15. A study of dynamic logistic model for fishing industry, Interdisciplinary applications of mathematical and statical techniques, Indian society of mathematics and mathematical sciences February 25-26 2012

16. The effect of external influences in innovation diffusion models, Recent trends in pure and applied mathematics, Department of mathematics and statistics D. D .U. Gorakhpur University Gorakhpur 24th-25th , July 2010

17. A study of mathematical model of technological innovation diffusion, Role of mathematics in real life, Department of mathematics Marwar business school Gorakhpur 26 march 2014

18. Mathematical models for launching new technology in the market, Recent trends in pure and applied mathematics, Department of mathematics and statistics D. D. U. Gorakhpur University Gorakhpur 11th-12th July 2009

19. Mathematical modeling of technological innovation diffusion, Emerging areas in mathematical sciences in first quarter of the century, Indian society of mathematics and mathematical sciences February 11-13 ,2005

20. Mathematical modeling of Intercategory and generational dynamics for growing industry Advances in mathematics and its applications, Indian society of mathematics and mathematical sciences 13-15 ,2005 February 13-15 , 2004

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