

PERSONAL PROFILE

Dr. MANOJ KUMAR

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Academic Qualification:

Course	Year	Board/University	Division/percentage
High School	2002	U. P. Board	1 st (64.33 %)
Intermediate	2004	U. P. Board	1 st (71.80 %)
B.Sc. (Mathematics, Physics)	2007	Udai Pratap Autonomous College, Varanasi (V.B.S. Purvanchal University, Jaunpur)	1 st (64.78%)
M.Sc. (Mathematics)	2009	Banaras Hindu University Varanasi	1 st (83.50%)
B. Ed. (Physical Sciences)	2010	Banaras Hindu University Varanasi	1 st (67.10%)
Ph.D. (Course Work)	2013	Banaras Hindu University Varanasi	1 st (75.20%)
Ph. D. (Mathematics)	2016	Banaras Hindu University Varanasi	AWARDED

Other Qualification : 1. GATE-2012 (Mathematics)
2. CSIR UGC NET-JRF (Mathematical Science)
3. BHU CRET-2011 (Mathematics)

Personal Details:

Father's Name : Late Shri Basakal
Mother's Name : Smt. Sudama Devi
Date of Birth : March 02, 1986.
Permanent Address : Village – Puari Khurd,
Post – Puari Kalan,
Varanasi-221202, U.P, India.
Language Known : Hindi & English

Fellowships/Awards

- BHU CRET-2011 (Mathematics) Fellowship from 09.11.2011 to 30.09.2012 at Department of Mathematics, Faculty of Sciences, Banaras Hindu University, Varanasi.
- CSIR UGC Junior Research Fellowship (JRF) from 01.10.2012 to 21.04.2014 at Department of Mathematics, Faculty of Sciences, Banaras Hindu University, Varanasi.
- Certificate of Appreciation for the Associate Dean Student Welfare, AKTU Lucknow on September 05, 2022.

Extra-curricular activities

- Scout Basic Course Part-1 from January 03, 2010 to January 07, 2010.
- Games and Sports.

Work Experience

- Assistant Professor (Senior Scale, Level 11), Applied Sciences and Humanities Department, Institute of Engineering & Technology, Lucknow (a constituent college of Dr. A. P. J. Abdul Kalam Technical University Uttar Pradesh, Lucknow) from August 28, 2021 to till date.
- Assistant Professor (Level 10), Applied Sciences and Humanities Department, Institute of Engineering & Technology, Lucknow (a constituent college of Dr. A. P. J. Abdul Kalam Technical University Uttar Pradesh, Lucknow) from August 28, 2017 to August 27, 2021.

Orientation Programme attended

- 4-Week Induction/Orientation Programme for "Faculty in Universities/Colleges/Institutes of Higher Education" 01st Sep 2020 - 30th Sep 2020 Teaching Learning Centre, Ramanujan College University of Delhi Attendee.
- Two Week (Online) Training Programme on "NEP 2020 Orientation & Sensitization Programme" 15th Jan 2024 - 28th Jan 2024 Mahatma Hansraj Malaviya Mission Teacher Training Centre (MH-MMTTC), Hansraj College, University of Delhi Attendee
- NEP 2020 Orientation & Sensitization Programme 22nd Jul 2024 - 31st Jul 2024 Teaching Learning Centre, Indian Institute of Technology (BHU) Varanasi Attendee

Refresher Courses attended

1. Fourier Analysis and Its Applications 01st Dec 2020 - 31st Mar 2021 Annual Refresher Programme in Teaching (ARPIT) SWAYAM-AICTE, India Attendee.
2. Two-week refresher course in “MATHEMATICS” 16th Mar 2021 - 30th Mar 2021, Teaching Learning Centre, Ramanujan College University of Delhi Attendee.
3. Two week refresher course in “Applicable Mathematics” 26th Jul 2022 - 08th Aug 2022, Teaching Learning Centre, Ramanujan College University of Delhi Attendee
4. Refresher course on “Mathematical and Computational Techniques for Real World Problems (Interdisciplinary)” from 04.12.2023 to 16.12.2023, HRDC, Guru Ghasidas Vishwavidyalaya, Bilaspur (C. G.), India-495009.
5. Online Refresher Course in “Mathematical Sciences” from 11.12.2024 to 24.12.2024 organized by MMTTC, Tezpur University in collaboration with Department of Mathematical Sciences, Tezpur University.

MOOCS/MODULES Certified

- Modern Algebra, 31st Aug 2019 - 10th Nov 2019 SWAYAM , Madurai Kamraj University Attendee
- Measure Theory, 18th Jan 2021 - 09th Apr 2021 SWAYAM-NPTEL online Course Attendee
- Fourier Analysis and Its Applications, 01st Dec 2020 - 31st Mar 2021 Annual Refresher Programme in Teaching (ARPIT) SWAYAM-AICTE, India Attendee.
- Module 1- Orientation Towards Technical Education and Curriculum Aspects, 12th Feb 2020 - 27th Apr 2020, AICTE-NITTT Chennai Attendee
- Module 2 - Professional Ethics & Sustainability, 10th Sep 2020 - 11th Nov 2020, AICTE-NITTT Chennai Attendee
- Module 3 – Communication Skills, Modes and Knowledge Dissemination, AICTE-NITTT Chennai Attendee
- Module 4- Instructional Planning and Delivery 01st Apr 2022 - 31st May 2022 National Institute of Technical Teachers Training and Research, Bhopal Attendee
- Module 5 – Technology Enabled Learning and Life-Long Self Learning, AICTE-NITTT Chennai Attendee
- Module 6 - Student Assessment and Evaluation 01st Apr 2022 - 31st May 2022 National Institute of Technical Teachers Training and Research, Chennai Attendee
- Module 7 – Creative Problem Solving, Innovation and Meaningful R & D, AICTE-NITTT Chennai Attendee
- Module 8 - Institutional Management & Administrative procedures 01st Apr 2022 - 31st May 2022 National Institute of Technical Teachers Training and Research, Chandigarh Attendee
- Dynamical System and Control 23rd Jan 2023 - 14th Apr 2023 IIT Roorkee (SWAYAM-NPTEL online Course) Attendee

- Introduction to Methods of Applied Mathematics 24th Jul 2023 - 13th Oct 2023 IIT Delhi, DTU Delhi (SWAYAM-NPTEL online Course) Attendee
- Scientific Computing using MATLAB 22nd Jan 2024 - 12th Apr 2024 IIT Madras, SWAYAM-NPTEL Course Attendee
- Discrete Mathematics for CS 20th Jan 2025 - 11th Apr 2025 IIT Kanpur, SWAYAM-NPTEL MOOCS course Attendee
- Theory of Real Functions 14th Jul 2025 – 31st Oct 2025 St. Mary’s College (Autonomous), Thrissur, SWAYAM-NPTEL MOOCS course Attendee

Published Research Papers

1. Shyam Lal and **Manoj Kumar**, Approximation of Functions of Space $L^2(\mathbb{R})$ by Wavelet Expansions, Lobachevskii Journal of Mathematics, Vol. 34, No. 2, pp. 163–172, 2013.
2. Shyam Lal and **Manoj Kumar**, “On Generalized Carleson Operators of Periodic Wavelet Packet Expansions,” The Scientific World Journal, Vol. 2013, Article ID 379861, 10 pages, 2013. doi:10.1155/2013/379861. **(I.F.-1.73)**
3. Shyam Lal and **Manoj Kumar**, Wavelet Approximation Using $(\Lambda \cdot C_1)$ Matrix-Cesàro Summability Method of Jacobi Series, International Journal of Computer Applications, Vol. 147, No. 14, pp. 1-9, 2016.
4. **Manoj Kumar** and Shyam Lal, On Cesàro’s Means of First Order of Wavelet Packet Series, Ratio Mathematica, Vol. 41(2021), pp. 197-205, 2021.
5. **Manoj Kumar** and Shyam Lal, On the Convergence of Wavelet Frame Series, Palestine Journal of Mathematics, Vol. 11(Special Issue D), pp. 46-57, 2022.
6. **Manoj Kumar**, Generalized Continuous Integral Wavelet Transform and Its Properties, Ratio Mathematica, Vol. 43(2022), pp. 151-162, 2022.
7. Vivek, **Manoj Kumar**, and S. N. Mishra. “A fast Fibonacci wavelet-based numerical algorithm for the solution of HIV-infected CD4+ T cells model.” The European Physical Journal Plus. 2023 May 25;138(5):458. **(I.F.-3.758)**
8. Vivek, **Manoj Kumar**, and S. N. Mishra. "Solution of linear and nonlinear singular value problems using operational matrix of integration of Taylor wavelets." Journal of Taibah University for Science 17, no. 1 (2023): 2241716. **(I.F.-3.3)**
9. Vivek and **Manoj Kumar**, “Spreading behavior of biological SIR system of a COVID-19 disease through a fast Taylor wavelet based numerical algorithm”, Results in Control and Optimization, Vol. 13 (2023), pp. 1-13, 2023 **(I.F.-3.0)**
10. Vivek and **Manoj Kumar**, and S. N. Mishra. "Taylor wavelet approach for the solution of the Fredholm integro-differential equation of the second kind." Jnanabha, Vol. 53, no. 2, pp. 273-286, 2023.

11. Vivek, **Manoj Kumar**, and S. N. Mishra. “A fast Taylor-wavelet based numerical algorithm for the solution of HIV-infected CD4+ T cells model.” *Filomat*, Vol. 38, No. 8, pp. 2949-2963, 2024 (**I.F.-0.8**)
12. Vivek and **Manoj Kumar**,”Bernoulli wavelet application to the numerical solution of Jeffery-Hamel flow problem”, *Numerical Heat Transfer, Part B: Fundamentals*, DOI: [10.1080/10407790.2024.2325026](https://doi.org/10.1080/10407790.2024.2325026), 2024. (**I.F.-1.7**)
13. Vivek and **Manoj Kumar**, “Solution of linear and nonlinear singular value problems using operational matrix of integration of Fibonacci wavelets”, *Journal of Engineering Mathematics*, Vol. 145, No. 19, pp. 1-32, 2024. (**I.F.-1.4**)
14. Vivek, **Manoj Kumar** and Julee Shahni,”New algorithm based on Hermite wavelets and Green’s function to solve Thomas-Fermi type differential equations”, *Numerical Heat Transfer, Part B: Fundamentals*, DOI: [10.1080/10407790.2024.2353794](https://doi.org/10.1080/10407790.2024.2353794), 2024. (**I.F.-1.7**)
15. Vivek, **Manoj Kumar** and S. N. Mishra, “Study of the Spreading Behavior of the Biological SIR Model of COVID-19 Disease Through a Fast Fibonacci Wavelet-Based Computational Approach”, *Int. J. Appl. Comput. Math.*, Vol. 10, No. 106, pp. 1-28, 2024.
16. Vivek and **Manoj Kumar**, “A super convergent numerical method under the Fibonacci wavelets for solving the system of nonlinear singular Lane-Emden-type equations”, *The European Physical Journal Plus*, Vol. 139, No. 506, pp. 1-30, 2024. (**I.F.-2.8**)
17. Vipin Kumar Singh, Satendra Kumar, Maya Ram and **Manoj Kumar**, “On the Convergence of S-iteration Process (SIP) of Inexact Newton Method (INM)”, *GANITA*, Vol. 74, No. 2, pp. 15-35, 2024.
18. Vivek, **Manoj Kumar**, H. M. Srivastava and Suyash Narayan Mishra, “Efficient numerical algorithm for solving the Benjamin-Bona-Mahony partial differential equation using Fibonacci wavelets and advanced computational techniques”, *Filomat*, Vol. 39, No. 1, pp. 325-344, 2025. (**I.F.-0.8**)
19. Maya Ram, **Manoj Kumar**, Vipin Kumar Singh, An inertial iterative method for common solution of a pair of variational inequality problems, *International Journal of Computer Mathematics*, Taylor & Francis Group, Vol. , pp. 1-19, 2025. DOI : [10.1080/00207160.2025.2572736](https://doi.org/10.1080/00207160.2025.2572736) (**SCIE, I.F.-1.3**)
20. Vicek and **Manoj Kumar**, “Superfast computational approach using wavelets for nonlinear elliptic PDEs”, *Journal of Mathematical Chemistry*, Vol. 64 No. 1, pp. 1-23, 2026. <https://doi.org/10.1007/s10910-025-01760-7> (**SCIE I.F. – 2.0**)

Ph. D. Supervisions

1. Vivek, Certain Contributions to Wavelet Analysis and Its Applications, June 2025, Dr APJ Abdul Kalam Technical University Uttar Pradesh, Lucknow Awarded

Conferences / Workshops / Training Programmes attended

International

- International Conference on Emerging Trends on Mathematical, Physical, Chemical Sciences and Literatures for Sustainable Development (ETMPCSL '26) 06th Mar 2026 - 07th Mar 2026 Department of Science and Humanities, AAA College of Engineering and Technology, Amathur -626005, Tamil Nadu, India Author
- 91st Annual Conference of the Indian Mathematical Society (IMS) - an International Meet 26th Dec 2025 - 29th Dec 2025 University of Lucknow, Lucknow, U.P., India Author
- International e-conference on Recent Developments in Pure and Applied Mathematics (RDPAM-2025) 13th Nov 2025 - 14th Nov 2025 Department of Mathematics & IQAC, Government Degree College Chakrata (Dehradun), India in collaboration with Department of Mathematics, Pt. L. M. S. Campus Sri Dev Suman Uttarakhand University, Rishikesh, India Author
- Third International Workshop on Advanced Topics in Mathematics (IWATM-2024) during December 16-20, 2024 organized by the Centre for Applied Mathematics, International Institute of Information Technology, Naya Raipur, Attendee
- 5th Doctoral Symposium on Computational Intelligence (an International Conference) 10th May 2024 - 11th May 2024 Institute of Engineering and Technology, Lucknow, Campus of Open Learning, University of Delhi, Shaheed Rajguru College of Applied Sciences for Women, University of Delhi and University of Calabria, Italy Attendee
- International Conference on Mathematical Sciences and Its Applications to Artificial Intelligence (ICMSAAI-24) 17th Jan 2024 - 19th Jan 2024 Department of Mathematics Faculty of Science & Humanities SRM University Delhi – NCR, Sonapat, Haryana – 131029 Author
- 2nd International conference on Mathematical, Engineering and Management Sciences(ICMEMS-2023), May 21-22, 2023, MNIT Jaipur, India, Co-author

- International Conference on Mathematics and Computation (ICMC-2021) 22nd Oct 2021 - 23rd Oct 2021 Department of Applied Sciences and Humanities, Rajkiya Engineering College, Kannauj, UP, India Author
- International Workshop on “Advanced Topics in Mathematics-2021”, 08th Oct 2021 - 12th Oct 2021 Centre for Applied Mathematics, International Institute of Information Technology Naya Raipur Attendee
- International FDP on Advanced Linear Algebra 27th Sep 2021 - 01st Oct 2021 Miranda House, University of Delhi in collaboration with Mahatma Hansraj FDC Hansraj College, University of Delhi Attendee
- The 4th International Conference on Mathematical Modelling, Applied Analysis and Computation-2021 05th Aug 2021 - 07th Aug 2021 Department of Mathematics, Faculty of Science, JECRC University, Jaipur (Raj.), India Author
- 18th International Conference of International Academy of Physical Sciences on Recent Trends in Physical Sciences 22nd Dec 2015 - 24th Dec 2015 Faculty of Science, University of Allahabad, Allahabad 211002 India Author

National

- Computational Tools and Numerical Methods in Engineering and Applied Sciences 13th Oct 2025 - 18th Oct 2025 Department of Mathematics, Jaypee Institute of Information Technology, Noida, INDIA Attendee
- Outcome Based Education and Curriculum (OBE-7) 08th Sep 2025 - 12th Sep 2025 National Institute of Technical Teacher's Training and Research (NITTTR), Bhopal and Institute of Engineering and Technology (IET), Lucknow at IET Lucknow Attendee
- National Workshop on Algebra & Its Applications 18th Nov 2024 - 23rd Nov 2024 Department of Mathematics, Mahatma Gandhi Kashi Vidyapeeth, Varanasi-2 (UP) Attendee
- Outcome Based Education and Application of Generative AI in Teaching and Research 19th Sep 2024 - 28th Sep 2024 The University of Engineering & Management Jaipur, Rajasthan and Nirmala College, Muvattupuzha (Autonomous), Kerala Attendee
- Recent Developments in Mathematical Sciences and Engineering 22nd Dec 2021 - 26th Dec 2021 Maharshi Dayanand University, Rohtak Attendee
- Advanced Mathematical Techniques in Engineering and Technology 18th Oct 2021 - 22nd Oct 2021 Maharshi Dayanand University Rohtak Attendee
- Sustainable Change Management in Technical Institutes for NEP – 2020 Implementation 23rd Aug 2021 - 28th Aug 2021 Government Engineering College, Bilaspur Attendee
- Mathematical Analysis and its Applications 26th Jul 2021 - 31st Jul 2021 Vivekananda College, University of Delhi in collaboration with Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi Attendee

- Research Methodology-2021 22nd Jun 2021 - 23rd Jun 2021 The Bhaskara's Association, Department of Mathematics, Faculty of Science, SGT University, Gurugram, Haryana, India Attendee
- Applications of Mathematics in Business and Social Sciences 18th Mar 2021 - 24th Mar 2021 Department of Mathematics & IQAC Miranda House, University of Delhi Attendee
- Renewable Energy and Effluent Treatment (REET-2021) 01st Mar 2021 - 05th Mar 2021 Department of Chemical Engineering, Institute of Engineering and Technology, Lucknow Attendee
- Sustainable Trends in Energy and Environment (STEE-2021) 06th Feb 2021 - 10th Feb 2021 Department of Chemical Engineering, Institute of Engineering and Technology, Lucknow Attendee
- Emotional Intelligence 19th Oct 2020 - 23rd Oct 2020 Marathwada Mitra Mandal's College of Pharmacy Attendee
- Mathematical Tools and Recent Advances in Mathematics 21st Sep 2020 - 25th Sep 2020 Mathematics and Scientific Computing Department, Madan Mohan Malaviya University of Technology, Gorakhpur Attendee
- Enablers of Quality in Technical Education for Employability 24th May 2020 - 24th May 2020 Dr. A. P. J. Abdul Kalam Technical University, Uttar Pradesh, Lucknow Attendee
- Relevance of Ayurvedic Practices in current scenario 18th May 2020 - 18th May 2020 AKTU Lucknow Attendee
- Problem Based and Project Based Learning 22nd Feb 2020 - 22nd Feb 2020 State Project Implementation Unit -UP Attendee
- Equity: Achievements and Challenges in India 15th Mar 2019 - 16th Mar 2019 NPIU, MHRD, Government of India, New Delhi and SPIU, Maharashtra State, Mumbai in association with the College of Engineering Pune Attendee
- Advances in Renewable and Bioenergy 19th Feb 2019 - 23rd Feb 2019 Department of Chemical Engineering, IET Lucknow Attendee
- Renewable Energy and Environment 27th Feb 2018 - 27th Feb 2018 Department of Chemical Engineering, IET Lucknow Attendee
- Universal Human Values and Professional Ethics 15th Dec 2017 - 22nd Dec 2017 Teqip III, IET LUCKNOW Attendee
- 30th Annual National Conference of the Mathematical Society Banaras Hindu University on Mathematical Analysis and... 30th Jan 2015 - 31st Jan 2015 Department of Mathematics, BHU, Varanasi Author
- 29th Annual National Conference of the Mathematical Society Banaras Hindu University on recent trends in Mathematical... 03rd Feb 2014 - 04th Feb 2014 Department of Mathematics, BHU, Varanasi Author
- National conference on Application of Modern Mathematical Techniques in the Field of Summability and Central Theme of... 23rd Jan 2012 - 24th Jan 2012 Shri Baldeo P. G. College Baragaon, Varanasi, UP Author

Additional Responsibilities at IET, Lucknow/ AKTU, Lucknow

- Associate Dean Student Welfare, AKTU, Lucknow from 03 May, 2018 to till date.
- Warden, Dr. RML Hostel, IET, Lucknow
- Deputy Controller of Examination, AKTU, Lucknow from 22.12.2022 to 08.10.2024.
- Deputy Controller of Examination, IET, Lucknow from 20.02.2025 to 13.02.2026.
- Member of Scholarship Disbursement Committee, IET Lucknow.
- Member of Board of Studies, Department of Applied Science, IET, Lucknow.
- Member of Proctorial Board, IET Lucknow
- Member of Branch change committee, AKTU, Lucknow in 2023-24, 2024-25 & 2025-26.

Date:

Place: Varanasi.

(Manoj Kumar)