Faculty Details

Title	Dr.	First Name	Pooja Raj	Last Name	Verma	Photograph
Designation		Assistant Professor				
Address		Department of Mathematics, Shaheed Bhagat Singh College, University of Delhi, Sheikh Sarai, Phase-II, New Delhi-110011				
Date of Birth		20-06-1987				
Phone No Office		--				
Mobile		9650855876				
Email		poojaraj.verma@sbs.du.ac.in				
Web-Page		--				

Educational Qualifications

Degree	Institution	Year
Ph.D.	Indian Institute of Technology Roorkee	2015
M. Sc.	Indian Institute of Technology Delhi	2009

Career Profile

- Assistant Professor on Permanent basis (Academic Level-12) at Shaheed Bhagat Singh College from 16-08-2023 to present
- Assistant Professor on Permanent basis (Academic Level-11) at Shaheed Bhagat Singh College from 16-08-2020 to 15-08-2023.
- Assistant Professor on Permanent basis (Academic Level-10) at Shaheed Bhagat Singh College from 16-07-15 to 15-08-2020.
- Assistant Professor on Permanent basis (Academic Level-10) at Madan Modan Malaviya University of Technology, Gorakhpur (U.P.) from 10-02-15 to 30-06-15.
- Assistant Professor on ad-hoc basis at Shaheed Bhagat Singh College from 28-07-14 to 06-02-15.

Areas of Interest / Specialization

Fracture Mechanics, Mathematical Modelling, Differential Equation, Numerical Methods

Papers Taught

Ordinary Differential Equation
Partial Differential Equation
Multivariate Calculus

Probability & Statistics
C++ Programming
Real Analysis Complex Analysis
Numerical Analysis
Linear Algebra
Sequence and Series of the functions
Elementary Real Analysis
Graph Theory
Algebra
Calculus
Differential Equation-III
Linear Algebra and Calculus
Analysis
Riemann Integration and theory of functions
Complex Analysis
Number Theory
Latex and HTML
IT Skills and Data Analysis-I
IT Skills and Data Analysis-II
Basic IT Tools

Research Guidance

PhD scholars		
Under Supervision	**Submitted**	**Awarded**
Three	**NIL**	**NIL**
M.Phil Scholars		
Under Supervision	**Submitted**	**Awarded**
NA		
M.A. Dissertations		
Under Supervision	**Awarded**	
NA		

Publications Profile

Books

Title	**ISBN/Publisher/Link**	**Indexed Scopus etc**	**Year**

			if any				
Latex and HTML		Verdhman Publications. ISBN No. 978-81-928184-6-7	------		2016		

Research Publications

Article Name	**Publication Type (UGC Care/ Scopus/ Web of science etc)**	**Journal Name**	**ISSN No**	**Volume**	**Year**	**URL**	**DOI**
Generalized mathematical electro-mechanical-yielding zone model for a non-centric semi-permeable anti-plane crack in arbitrary polarized piezoelectric strip	**SCI/Scopus**	Applied Mathematical Modelling	Online ISSN: 1872-8480 Print ISSN: 0307-904X	**143**	**2025**	**https://www.sciencedirect.com/science/article/abs/pii/S0307904X25000708**	**https://doi.org/10.1016/j.apm.2025.115995**
Numerical simulations to analyze the impact of vascular network complexity over cryosurgical	**Scopus**	International Journal for Computational Methods in Engineering Science and Mechanics	Print ISSN: 1550-2287 Online ISSN: 1550-2295	**26**	**2024**	**https://www.tandfonline.com/doi/abs/10.1080/15502287.2024.2405708**	**https://doi.org/10.1080/15502287.2024.2405708**

treatment process of two-dimensional liver tumor tissue							
Strip-saturation model for arbitrary polarized electro-elastic material weakened by an eccentrically situated anti-plane semipermeable crack	**Scopus**	International Journal for Computational Methods in Engineering Science & Mechanics	1550-2287	**2023**	**2023**	https://www.tandfonline.com/doi/full/10.1080/15502287.2023.2261258?src=recsys	https://doi.org/10.1080/15502287.2023.2261258
Numerical Simulation of bio-heat transfer for cryoablation of regularly shaped tumours in liver tissue using multiprobes	**SCI/Scopus**	Journal of Thermal Biology	0306-4565	**113**	**2023**	https://www.sciencedirect.com/science/article/abs/pii/S0306452300724	https://doi.org/10.1016/j.jtherbio.2023.103531
Magnetic-yielding zone model for assessment of two mode-III semi-	**SCI/Scopus**	Mechanics of Advanced Materials and Structures	1521-0596	**29**	**2022**	https://www.tandfonline.com/doi/full/10.1080/15376494.202	https://doi.org/10.1080/15376494.2020.1827

permeable collinear cracks in piezo-electromagnetic strip						0.1827466	466
Generalised strip-saturation zone models for piezoelectric strip weakened by non-centric semi-permeable crack	**SCI/Scopus**	Meccanica	0025-6455	**56**	2021	https://link.springer.com/article/10.1007/s11012-021-01408-1#:~:text=Strip%2Dsaturation%20zone%20model%20is,and%20cubic%20interpolating%20polynomials%20times.	**10.1007/s11012-021-01408-1**
Influence of poling angle on a mode-III non-centric semipermeable crack in the piezoelectric strip under linearly varying load overdeveloped zones	**SCI/Scopus**	Mechanics of Advanced Materials and Structures	1521-0596	**29**	2021	https://www.tandfonline.com/doi/abs/10.1080/15376494.2021.1953647	https://doi.org/10.1080/15376494.2021.1953647

Magneto-electro-elastic analysis for two mode-III semipermeable collinear cracks in piezo-electro-magnetic strip	Scopus	International Journal of Mathematical Modelling and Numerical Optimisation	2040-3607	10	2020	https://www.inderscienceonline.com/doi/abs/10.1504/IJMMNO.2020.106535	https://doi.org/10.1504/IJMMNO.2020.106535
Poling angle effect on two mode-III semi-permeable collinear cracks in a piezoelectric strip: Strip-saturation model	SCI/Scopus	Applied Mathematical Modelling	1872-8480	88	2020	https://www.sciencedirect.com/science/article/abs/pii/S0307904X20303395	https://doi.org/10.1016/j.apm.2020.06.063
Strip-electro-mechanical yield model for transversely situated two semi-permeable collinear cracks in piezoelectric strip	SCI/Scopus	Theoretical and Applied Fracture Mechanics	0167-8442	81	2016	https://www.sciencedirect.com/science/article/abs/pii/S0167844214201352	https://doi.org/10.1016/j.tafmec.2015.10.009
Strip-saturation-induction model mode-III	Scopus	Springer Proceedings in Mathematics and		117	2016	https://link.springer.com/chapter/10.1007/978-3-	https://link.springer.com/chapter/10

solution for piezo-electro-magnetic strip		Statistics				319-12307-3_13	.1007/978-3-319-12307-3_13
A Study of Crack-Face Boundary Conditions for Piezoelectric Strip Cut Along Two Equal Collinear Cracks	SCI/Scopus	Advances in Applied Mathematics and Mechanics	2070-0733	8	2016	https://www.cambridge.org/core/journals/advances-in-applied-mathematics-and-mechanics/article/abs/study-of-crackface-boundary-conditions-for-piezoelectric-strip-cut-along-two-equal-collinear-cracks/2BADC7AED1B8C1357711D432E03DBC12	10.4208/aamm.2014.m866

Mathematical model of electrical and mechanical yielding for piezoelectric strip weakened by a non-centric semi-permeable crack	SCI/Scopus	Applied Mathematical Modelling	0307-904X	39	2015	https://www.sciencedirect.com/science/article/pii/S0307904X14003102	https://doi.org/10.1016/j.apm.2014.06.007
A mathematical strip-induction-saturation model for an off-centric semi-permeable crack in a piezo-electro-magnetic strip	SCI/Scopus/UGC	Acta Mechanica	0001-5970	226	2015	https://link.springer.com/article/10.1007/s00707-014-1185-2	10.1007/s00707-014-1185-2
A modified strip-yield saturation-induction model solution for cracked piezoelectro-magnetic plate	Scopus	International Journal of Engineering Mathematics	2356-7007	2014	2014	https://www.hindawi.com/journals/ijem/2014/892576/	https://doi.org/10.1155/2014/892576
Two semi-permeable equal collinear cracks	SCI/ Scopus	ZAMM- Journal of Applied Mathematics and Mechanics	1521-4001	95	2013	https://onlinelibrary.wiley.com/doi/10.1002/za	**https://doi.org/10.1002/zamm.201300109**

weakening a piezoelectric plate – A study using complex variable technique						mm.201300109	
A Crack Arrest Study for PiezoElectro-Magnetic Media under Mechanical, Electric and Magnetic Small-Scale-Yielding	Scopus	Journal of Communications in Computer and Information Science	1865-0937	282	2012	https://link.springer.com/chapter/10.1007/978-3-642-28926-2_41	https://link.springer.com/chapter/10.1007/978-3-642-28926-2_41

Publications other than journal articles

Title of Publication	Type of Publication	Publisher	Role in Publication	ISBN Number	Year	URL	Level

Conference/ workshop Organized

- Member of the Organizing Committee for the International G20 Conference on "Resilient Approaches for New World Order & Viksit Bharat" held on 25th September 2023 at Dr. Ambedkar International Centre, New Delhi, organized by Shaheed Bhagat Singh College, University of Delhi.
- Member of program committee in the three days International Conference on Advances in Differential Equations in Mathematical Modelling, organized by School of Computational and Integrative Sciences, JNU, New Delhi from 18-20 December, 2020.
- Convener of National Conference on Emerging Trends in Mathematical Sciences for Industry and Environment: Use of Hindi Technical Terminology, from 27-29 Jan 2020, organized by the Department of Mathematics, Shaheed Bhagat Singh College, University of Delhi.
- Member of the organizing committee of the International Conference on Applicable Analysis, from 8-11 February 2017, organized by the Department of Mathematics, Shaheed Bhagat Singh College, University of Delhi.

- Co-convener of the National Workshop on Latex and Website Designing, from 11-12 Aug, 2016, organized by the Department of Mathematics, Shaheed Bhagat Singh College, University of Delhi.

Awards and Distinctions

- JAM Rank (Joint admission test to M.Sc.): 31 (AIR)
- Gate Score (Graduate Aptitude Test in Engineering) : 309 (2009)
- NET (National Eligibility Test for Teaching): UGC-JRF (Rank: 122)
- Junior Research Fellowship (MHRD-JRF): Dec. 2009 – 2012
- Senior Research Fellowship (MHRD-SRF): January 2012-June 2014.

Association with Professional Bodies

- Membership of International Association of Engineers (IAENG) Member No. 135505.

Other Activities

Invited Talks:

- Delivered five lectures series on TEQIP-III sponsored ten days student workshop (Remedial Classes) on Engineering Mathematics-I organized by RAJASTHAN TECHNICAL UNIVERSITY, KOTA and Poornima Institute of Engineering and Technology, Jaipur, from January 27 to February 05, 2021
- National Conference on Mathematical Techniques in Engineering and Technology" (MTET-2016) from 30-31 March 2016, organized by Department of Mathematics, Babasaheb Bhimrao Ambedkar University, Lucknow.
- An invited talk in National Conference on Recent Advances in Mathematics and Applications" (NCRAMA-2014) from 30-31 Oct, 2014, organized by Department of Applied Sciences, Babasaheb Bhimrao Ambedkar University, Lucknow.

College Administrative Responsbilities

- Member of "Career Counselling & Guidance Cell" of the college for the academic session 2024-25.
- Teacher-in-charge of the Department of Mathematics for the academic session 2023-24.
- Convener of the Workload and timetable committee of the Department of Mathematics for the academic session 2022-23.
- Nodal Officer of College's Twitter Handle for 2021-22, 2022-23, 2023-24.
- Convener of Website Designing Committee of staff council for the academic sessions 2020-

21 and 2019-2020.

- Member of Computerization Committee for the academic session 2020-21 and 2019-2020.
- Member of Gold Metal Committee for the academic session 2020-21 and 2019-2020.
- Member of Finance Committee for the academic session 2020-21 and 2019-2020.
- Convener of The Mathematics Society for sessions 2019-2020.
- Co-convener of the Computerization Committee for sessions 2017-2018 and 2016-2017.
- Co-convener of The Mathematics Society for sessions 2017-18 and 2016-17.
- Member of NSS Committee for sessions 2017-18, 2016-17 and 2015-16.
- Member of the Website Designing Committee for sessions 2016-17 and 2017-18.
- Member of Finance Committee for the academic session 2016-2017.
- Member of the NAAC Committee of the Department in 2016-2017.

Conferences Attended

Name of the conference	Venue	Date	Title of paper presented
National Conference on Complex Systems in Interdisciplinary Sciences	Jamia Millia Islamia, New Delhi	March 11-12, 2019	Mathematical electric-yielding model for mode-III semi-permeable collinear cracks weakening a piezoelectric strip
National Conference on Modeling, Optimization and Computing for Engineering Problems (MOCEP): use of Technical Hindi Terminology	Department of Mathematics, IIT Roorkee	Oct 12-14, 2018	Electro-elastic analysis for two mode-III semi-permeable collinear cracks in piezo-electro-magnetic strip
17th U.S. National Congress on Theoretical and Applied Mechanics (USCTAM)	Michigan state University, Michigan (USA)	15/6/2014 to 20/6/2014	Influence of crack-face boundary conditions on piezoelectric strip with two collinear equal cracks
The Second International Conference on Engineering and Computational Mathematics (ECM)	The Hong-Kong Polytecnique university, Hong-Kong	16/12/2013 to 18/12/2013	Strip-saturation model for piezoelectric strip cut along two collinear cracks under Mode-III deformation

International Congress on Computational Mechanics and Simulation (ICCMS)	Indian Institute of Technology Hyderabad	Dec 10-12, 2012	Crack growth resistance model for cracked piezoelectric strip
International Conference on Mathematical Modelling & Scientific Computation (ICMMSC)	Gandhi gram Rural Institute - Deemed University, Tamil Nadu	March 16-18, 2012	A Crack Arrest Study for Piezo-Electro-Magnetic Media under Mechanical, Electric and Magnetic Small-Scale-Yielding
International Conference on Advance in Modelling, Optimisation and Computing (AMOC)	Indian Institute of Technology Roorkee	Dec 5-7, 2011	Strip-Yield Solution for a Cracked Piezo-Electromagnetic Ceramic under Mode–III Deformations

Workshops Attended

Title	Institute organized	Date
Emerging Trends in Vedic Mathematics & Applications in Science, Technology and Social Sciences Research	Special Centre for E-Learning, Jawaharlal Nehru University, New Delhi-110067	16/08/2020 -17/08/ 2020
Faculty Development Programme On Advanced Concepts for Developing MOOCS	Ramanujan College, University of Delhi under PMMMNMTT Scheme	02/07/2020 to 17/07/2020
Workshop on "Digital Turn in Education: A New Pattern in Teaching-Learning Practices"	Atma Ram Sanatan Dharam College, University of Delhi	20/06/2020 to 22/06/2020
Refresher course in Computational & Mathematical Sciences	UGC- HRDC, Jamia Milia Islamia, New Delhi	07/02/2020 to 20/02/2020
Faculty Development Programme	Shaheed Bhagat Singh College, University of Delhi Under PMMMNMTT Scheme	15/12/2018 to 27/12/2018
Orientation Programme (OR-93)	CPDHE (UGC-HRDC),	3/07/2018 to 30/07/2018

	University of Delhi	
Faculty Development Programme on Mathematica: A Tool for Computational Analysis	Hansraj College, University of Delhi	10/03/2018 to 11/03/2018
Faculty Development Programme on Emerging Trends in Mathematics	Atma Ram Sanatan Dharma College, University of Delhi	01/02/2018
Capacity-building Workshop	Institute of Lifelong Learning, University of Delhi	21/06/2016
National Workshop on Mathematical Modelling and Computational Techniques using Mathematica	Zakir Husain College, University of Delhi	30/03/2017 to 31/03/2017
State Level Faculty Interaction Seminar	Harcourt Butlar Technological Institute Kanpur, U.P.	08/06/2015 to 09/06/2015
AIS PDE (2012)	Tata Institute of Fundamental Research Bangalore	17/12/2012 to 04/01/2013
International workshop on Modeling, Computing and Optimization (MCO-2012)	Indian Institute of Technology Madras	3/9/2012 to 12/9/2012
National workshop on Linear and Nonlinear systems	Banasthali Vidyapith	15/12/2011 to 19/12/2011
Simulation and design using Extended Finite Element Methods	Indian Institute of Technology Roorkee	13/12/2010 to 17/12/2010