




Faculty Details Proforma



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						
<ul style="list-style-type: none">Assistant Professor on Permanent basis (Academic Level-11) at Shaheed Bhagat Singh College from 16-08-2018 to presentAssistant Professor on Permanent basis (Academic Level-10) at Shaheed Bhagat Singh College from 16-07-15 to 15-08-2018.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						
Papers Taught						
Ordinary Differential Equation Partial Differential Equation Multivariate Calculus Probability & Statistics C++ Programming Real Analysis Complex Analysis						

Numerical Analysis							
Research Guidance							
PhD scholars							
Under Supervision		Submitted		Awarded			
NA							
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 if any		Year	
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

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/S0306456523000724	https://doi.org/10.1016/j.jtherbio.2023.103531
Magnetic-yielding zone model for assessment of two mode-III semi-permeable	SCI/Scopus	Mechanics of Advanced Materials and Structures	1521-0596	29	2022	https://www.tandfonline.com/doi/full/10.1080/15376494.2020.1827466	https://doi.org/10.1080/15376494.2020.1827466

collinear cracks in piezo-electromagnetic strip							
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%20saturation%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-electromagnetic 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-electromechanical 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 solution for piezo-electro-magnetic strip	Scopus	Springer Proceedings in Mathematics and Statistics		117	2016	https://link.springer.com/chapter/10.1007/978-3-319-12307-3_13	https://link.springer.com/chapter/10.1007/978-3-319-12307-3_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/2BAD7AED1	10.4208/aamm.2014.m866

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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	Scopus	International Journal of Engineering Mathematics	2356-7007	2014	2014	https://www.hindawi.com/journals/ijem/2014/8	https://doi.org/10.1155/2014/892576

solution for cracked piezoelectromagnetic plate						92576/	
Two semi-permeable equal collinear cracks weakening a piezoelectric plate – A study using complex variable technique	SCI/Scopus	ZAMM- Journal of Applied Mathematics and Mechanics	1521-4001	95	2013	https://onlinelibrary.wiley.com/doi/10.1002/zamm.201300109	https://doi.org/10.1002/zamm.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 Publicati	Publisher	Role in Publicat	ISBN Numb	Year	URL	Level

	on		ion	er			
Conference/ workshop Organized							
<ul style="list-style-type: none"> • 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							
Association with Professional Bodies							
<ul style="list-style-type: none"> • Membership of International Association of Engineers (IAENG) Member No. 135505. 							
Other Activities							
<u>Invited Talks:</u>							
<ul style="list-style-type: none"> • 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 Responsibilities

- 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.

Visits Abroad (Conferences)

Name of the conference	Venue and country	Date	Title of paper presented	Funding Agency
17 th 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	CSIR
The Second International Conference on Engineering and Computational Mathematics (ECM)	The Hong-Kong Polytechnique 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	DST

National Visits (Conferences)

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
International Conference on Third Pole Demands Protection (HOPE)	ATI, Nainital	June 15-20, 2013	Mathematical Strip-yield Model for a non-centric crack in piezoelectric strip 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 (ICMMS)	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/Conferences 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), University of Delhi	3/07/2018 to 30/07/2018
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