Faculty Details Proforma

Title	Dr.	First Name	Nikita	Last Name	Setia	Photograph
Designation		Associate Professor				
Address		Department of Mathematics Shaheed Bhagat Singh College Sheikh Sarai Phase-II New Delhi - 110017				
Date of Birth		23-11-1986				
Phone No Office		--				
Mobile		9818957267				
Email		nikita.setia@sbs.du.ac.in, nikita.setia1@gmail.com				
Web-Page						

Educational Qualifications

Degree	Institution	Year
Ph.D Mathematics	Department of Mathematics, Faculty of Mathematical Sciences, University of Delhi	2015
M.Phil Mathematics	Department of Mathematics, Faculty of Mathematical Sciences, University of Delhi	2011
M.Sc Mathematics	Sri Venkateswara College, University of Delhi	2009
B.Sc(H)Mathematics	Acharya Narendra Dev College, University of Delhi	2007

Career Profile

1. Associate Professor at Shaheed Bhagat Singh College from 27-07-24 to present.
2. Assistant Professor on Permanent basis at Shaheed Bhagat Singh College from 24-06-15 to 26-07-24.
3. Assistant Professor on ad-hoc basis at Shaheed Bhagat Singh College from 23-07-12 to 23-06-15.
4. Senior Research Fellow of Council of Scientific and Industrial Research from 01-09-2011 to 22-07-12.
5. Junior Research Fellow of Council of Scientific and Industrial Research from 18-08-2009 to 31-08-11.

Areas of Interest / Specialization

Computational Techniques for Ordinary and Partial Differential Equations.

Papers Taught

1. Numerical Analysis
2. Discrete Mathematics
3. Reimann Integration and Series of Functions
4. Partial Differential Equations
5. Calculus
6. Group Theory
7. Real Analysis

Research Guidance Nil

PhD scholars

Under Supervision	Submitted	Awarded

M.Phil Scholars

Under Supervision	Submitted	Awarded

M.A. Dissertations

Under Supervision	Awarded

Publications Profile

Books

Title	ISBN/Publisher/ Link	Indexed Scopus etc if any	Year

Research Publications

Article Name	Publication Type (UGC	Journal Name	ISSN No	Volume	Year	URL	DOI

	Care/ Scopus / Web of science etc)						
Higher order approximation in exponential form based on half-step grid-points for 2D quasilinear elliptic BVPs on a variant domain	Scopus, Web of Science	**Methods X**	2215-0161	101980	2023	https://doi.org/10.1016/j.mex.2022.101980	https://doi.org/10.1016/j.mex.2022.101980
High precision compact numerical approximation in exponential form for the system of 2D quasilinear elliptic BVPs on a discrete irrational region	Scopus, Web of Science	**Methods X**	2215-0161	9 (Pages 101790)	2022	https://doi.org/10.1016/j.mex.2022.101790	https://doi.org/10.1016/j.mex.2022.101790
A high accuracy variable mesh numerical approximation for two point nonlinear BVPs	Scopus	**Soft Computing**	1433-7479 (online) 1432-7643	26 (Pages 9805 – 9821)	2022	https://doi.org/10.1007/s00500-022-07373-5	https://doi.org/10.1007/s00500-022-

with mixed boundary conditions			(print)				07373-5
A third-order finite difference method on a quasi-variable mesh for nonlinear two point boundary value problems with Robin boundary conditions	Scopus	**Soft Computing**	1433-7479 (online) 1432-7643 (print)	25(20) (Pages 12775-12788)	2021	https://doi.org/10.1007/s00500-021-06056-x	https://doi.org/10.1007/s00500-021-06056-x
Cubic Spline Approximation based on half-step discretization for 2D quasi-linear elliptic equations	Scopus, Web of Science	**International Journal for Computational Methods for Engineering, Science and Mechanics**	15502295, 15502287	22 (Pages 45-59)	2020	https://doi.org/10.1080/15502287.2020.1849444	https://doi.org/10.1080/15502287.2020.1849444
A class of quasi-variable mesh methods based on	Scopus, Web of Science	**Advances in Difference**	1687-1847	248 (Pages 1-27)	2016	https://doi.org/10.1186/s13	https://doi.org/10.11

off-step discretization for the solution of non-linear fourth order ordinary differential equations with Dirichlet and Neumann boundary conditions		**Equations**				662-016-0973-5	86/s13662-016-0973-5
A New High Accuracy Two - level Implicit Off - step Discretization for the System of Three Space Dimensional Quasi - linear Parabolic Partial Differential Equations	Scopus, Web of Science	**Computers and Mathematics with Applications**	0898-1221	69 (Pages 1096 – 1113)	2015	https://doi.org/10.1016/j.camwa.2015.03.004	https://doi.org/10.1016/j.camwa.2015.03.004
A New Compact Off - Step Discretization for the System of 2D Quasi - linear Elliptic Equations on Unequal Mesh	Scopus	**Computational Mathematics & Modeling**	1046-283X (Print), 1573-837X (Online)	25(3) (Pages 381 – 403)	2014	https://doi.org/10.1007/s10598-014-9234-1	https://doi.org/10.1007/s10598-014-9234-1

A New Compact High Order Off - step Discretization for the System of 2D Quasi - linear Elliptic Partial Differential Equations	Scopus, Web of Science	**Advances in Difference Equations**	1687-1847	223 (Pages 1 - 29.)	2013	https://doi.org/10.1186/1687-1847-2013-223	https://doi.org/10.1186/1687-1847-2013-223
A New High Order Compact Off - step Discretization for the System of 3D Quasi - linear Elliptic Partial Differential Equations	Scopus, Web of Science	**Applied Mathematical Modelling**	0307-904X	37 (Pages 6870 – 6883)	2013	https://doi.org/10.1016/j.apm.2013.02.018	https://doi.org/10.1016/j.apm.2013.02.018
A New High Accuracy Two - level Implicit Off - step Discretization for the System of Two Space Dimensional Quasi - linear Parabolic Partial Differential Equations	Scopus, Web of Science	**Applied Mathematics and Computation**	0096-3003	219 (Pages. 2680 – 2697)	2012	https://doi.org/10.1016/j.amc.2012.08.100	https://doi.org/10.1016/j.amc.2012.08.100
A New High Accuracy Variable Mesh Discretization for	Scopus	**Neural, Parallel and Scientific**	10615369	20 (Pages 415 –	2012	13-NPSC-32-SA-	13-NPSC-32-

the Solution of the System of 2D Non - linear Elliptic Boundary Value Problems		**Computations**		436)		21.pdf	SA-21.pdf
A New Fourth Order Compact Off-Step Discretization for the System of 2D Nonlinear Elliptic Partial Differential Equations	Scopus, Web of Science	**East Asian Journal on Applied Mathematics**		2 (Pages 59 – 82)	2012	https://doi.org/10.4208/eajam.291211.080212a	https://doi.org/10.4208/eajam.291211.080212a

Publications other than journal articles NIL

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

Conference/ workshop Organized

Awards and Distinctions

- Secured **1st position in the University of Delhi** in the second year of B.Sc (Hons) Mathematics, academic session 2005-2006.
- Secured **1st position in University of Delhi South Campus**, in M.Sc Mathematics, academic session 2007-2009.
- Received **DC Arora Fellowship** for academic excellence in the year 2006.
- Received **scholarship from the Government of Delhi**, for academic excellence in the year 2006.
- Received **certificate of merit and medal** from Sri Venkateswara College, University of Delhi for academic excellence in the year 2008.
- Received **certificate of merit and Gold medal** from Sri Venkateswara College, University of Delhi for academic excellence in the year 2009.

Association with Professional Bodies

Lifetime member of The Indian Mathematical Society (Membership No. L/2024/115)

Other Activities

- **Department Coordinator** for NIRF related work of the college during the academic year 2024-25.
- **Teacher Representative,** Governing Body**,** Shaheed Bhagat Singh College from 21.08.2024 to 20.08.2025.
- **Teacher-in-Charge**, Department of Mathematics, Shaheed Bhagat Singh College, University of Delhi, during the academic session 2022-23.
- **Convener**, Departmental Workload and Time Table Committee, Shaheed Bhagat Singh College, University of Delhi during the academic session 2021-22.
- **Convener**, The Mathematics Society, Shaheed Bhagat Singh College, University of Delhi, during the academic session 2020-21.
- **Co-convener** of The Mathematics Society of Shaheed Bhagat Singh College, University of Delhi, during the academic session 2015-16.
- Successfully completed **One-Week Faculty Development Programme** on *NEP Orientation and Senstization Programme* organised under UGC-MMTTC by CPDHE, University of Delhi, during February 20 – 29, 2024.
- Successfully completed **One-Week Faculty Development Programme** on *Advanced Research Methodology* organised by Teaching Learning Center, Ramanujan College, University of Delhi, during April 26 – May 09, 2024.
- Successfully completed **One-Week Faculty Development Programme** on *Open Source Tools for Research* organised by Teaching Learning Center, Ramanujan College, University of Delhi, during August 08 – 30, 2021.
- Successfully completed **Two-Week Faculty Development Programme** on *Mathematics* organised by Teaching Learning Center, Ramanujan College, University of Delhi, during August 31 – September 14, 2021.
- Successfully completed **Two-Week Faculty Development Programme** on *Mathematics* organised by Teaching Learning Center, Ramanujan College, University of Delhi, during March 16 – 30, 2021.

- Successfully **Two-Week Faculty Development Programme** on *Advanced Research Methodology* organised by Teaching Learning Center, Ramanujan College, University of Delhi, during January 30 – February 14, 2021.
- Successfully completed **One-Week Faculty Development Programme** on *Systematic Literature Review and Meta -Analysis* organised by Teaching Learning Center, Ramanujan College, University of Delhi, during October 22 – 27, 2020.
- Successfully completed **Four-Week Orientation Programme** organised by Teaching Learning Center, Ramanujan College, University of Delhi, during November 10 – December 09, 2020.
- Successfully completed **One-Week Faculty Development Programme** on *Development of MOOCS* organised by Teaching Learning Center, Ramanujan College, University of Delhi, during October 22 – 27, 2020.
- Successfully completed **Two-Week Faculty Development Programme** on *Research Methodology* organised by Teaching Learning Center, Ramanujan College, University of Delhi, during October 1 – 15, 2020.
- Attended a workshop "**Pedagogical Training for Mathematics Teachers: Real Analysis**" at Sri Venkateswara University, Tirupati, during November 10-16, 2016.
- **Presented a research paper** titled "A two level Implicit High Order Method for 2D Time-dependent Navier-Stokes equations in polar coordinates", in the International conference on current trends in PDEs: Theory and Computations, held at South Asian University, New Delhi, during December 28-30, 2015.
- Attended **"Instructional School for Lecturers: Analysis and Differential Equations"** at the Tata Institute of Fundamantal Research, Centre for Appicable Mathematics (TIFR-CAM), Bangalore, during December 7-19, 2015.
- Advanced **Workshop on Finite Difference Methods for Differential Equations**, South Asian University, New Delhi, during March 13-17, 2015.
- **Symposium on Discrete Mathematics and Discretization Methods,** South Asian University, New Delhi, during October 25 - 26, 2013.
- **Workshop on *Maxima*** held at Acharya Narendra Dev College, University of Delhi, on 17th August 2012.
- **Advanced Instructional School on Numerical Analysis (AIS)** held at Panjab University, Chandigarh, during 18 June – 7 July 2012.
- **Instructional Workshop on Adaptive Finite Element Methods (AFEM)** held at Indian Institute of Space Science and Technology (IIST) , Thiruvananthapuram, during 16 – 25 March 2012.