Faculty Details Proforma

Title	Dr.	First Name	Nikita	Last Name	Setia	Photograph

Designation	Assistant Professor
Address	Department of Mathematics Shaheed Bhagat Singh College (University of Delhi) 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	Nikita Setia - Google Scholar

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. Assistant Professor on Permanent basis (Academic Level-11) at Shaheed Bhagat Singh College from 27-07-16 to present.
2. Assistant Professor on Permanent basis (Academic Level-10) at Shaheed Bhagat Singh College from 24-06-15 to 26-07-16.
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 18-8-2009 to 31-08-11.

Areas of Interest / Specialization

Computational Techniques for Ordinary and Partial Differential Equations.

Papers Taught

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

Publications Profile

(*Refer to Google Scholar Profile:* [Nikita Setia - Google Scholar](#), *ResearchGate Profile:* [(2) Nikita Setia (researchgate.net)](#), ORCID ID: 0000-0002-5337-3367)

1. **Nikita Setia**, R.K. Mohanty, A high accuracy variable mesh numerical approximation for two point nonlinear BVPs with mixed boundary conditions, **Soft Computing** (Accepted for publication) (Publisher: Springer-Berlin Heidelberg, **ISSN:** 1432-7643).

2. **Nikita Setia**, R.K. Mohanty, A third-order finite difference method on a quasi-variable mesh for nonlinear two point boundary value problems with Robin boundary conditions, **Soft Computing**, 25(20) (2021) 12775-12788. (Publisher: Springer-Berlin Heidelberg, **ISSN:** 1432-7643).

3. R.K. Mohanty, R. Kumar, **Nikita Setia**, Cubic Spline Approximation based on half-step discretization for 2D quasi-linear elliptic equations, **International Journal for Computational Methods for Engineering, Science and Mechanics**, 22 (2020) 45-59. (Publisher: Taylor & Francis, **ISSN:** 15502295, 15502287).

4. R.K. Mohanty, Md. Hasan Sarwer, **Nikita Setia,** A class of quasi-variable mesh methods based on off-step discretization for the solution of non-linear fourth order ordinary differential equations with Dirichlet and Neumann boundary conditions, **Advances in Difference Equations**, 248 (2016) 1-27. (**Publisher**: Springer, **ISSN**: 1687-1847).

5. R.K. Mohanty and **Nikita Setia,** A New Fourth Order Compact Off-Step Discretization for the System of 2D Nonlinear Elliptic Partial Differential Equations, **East Asian Journal on Applied Mathematics**, 2 (2012) 59 - 82. (**Publisher**: Global Science Press, **ISSN**: Print: 2079-7362, Electronic: 2079-7370).

6. **Nikita Setia** and R.K. Mohanty**,** A New High Accuracy Variable Mesh Discretization for the Solution of the System of 2D Non - linear Elliptic Boundary Value Problems, **Neural, Parallel and Scientific Computations,** 20 (2012) 415 - 436**. (Publisher**: Dyanamic Publishers, **ISSN**: 10615369).

7. R.K. Mohanty and **Nikita Setia,** A New High Accuracy Two - level Implicit Off - step Discretization for the System of Two Space Dimensional Quasi - linear Parabolic Partial Differential Equations, **Applied Mathematics and Computation,** 219 (2012) 2680 - 2697. (**Publisher**: Elsevier, **ISSN**: 0096-3003).

8. R.K. Mohanty and **Nikita Setia,** A New High Order Compact Off - step Discretization for the System of 3D Quasi - linear Elliptic Partial Differential Equations, **Applied Mathematical Modelling**, 37 (2013) 6870 - 6883. (**Publisher**: Elsevier, **ISSN**: 0307-904X).

9. R.K. Mohanty and **Nikita Setia,** A New Compact High Order Off - step Discretization for the System of 2D Quasi - linear Elliptic Partial Differential Equations**, Advances in Difference Equations,** 223 (2013) 1 - 29. (**Publisher**: Springer, **ISSN**: 1687-1847).

10. R.K. Mohanty and **Nikita Setia,** A New Compact Off - Step Discretization for the System of 2D Quasi - linear Elliptic Equations on Unequal Mesh, **Computational Mathematics & Modeling,** 25(3) (2014) 381 - 403. (**Publisher:** Springer, **ISSN**: 1046-283X (Print), 1573-837X (Online)).

11. R.K. Mohanty and **Nikita Setia,** A New High Accuracy Two - level Implicit Off - step Discretization for the System of Three Space Dimensional Quasi - linear Parabolic Partial Differential Equations, **Computers and Mathematics with Applications,** 69 (2015) 1096 - 1113. (**Publisher:** Elsevier, **ISSN**: 0898-1221).

Conference/Workshop organized

Organized a talk on "Mathematical Modelling with Applications" on November 09, 2020 via Zoom Platform.

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.

Other Activities

- **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.

- **Quiz organiser** in the Mathematics Fest *GANITAM* held at Shaheed Bhagat Singh College, University of Delhi, during 18 - 19 February, 2015.

- **Quiz organiser** in the Mathematics Fest *GANITAM* held at Shaheed Bhagat Singh College, University of Delhi, during 5 - 6 March, 2014.

- 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, with grade A+.

- Successfully completed **Two-Week Faculty Development Programme** on *Mathematics* organised by Teaching Learning Center, Ramanujan College, University of Delhi, during March 16 – 30, 2021, with grade A+.

- 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, with grade A+.

- 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, with grade A+.

- Successfully completed **Four-Week Orientation Programme** organised by Teaching Learning Center, Ramanujan College, University of Delhi, during November 10 – December 09, 2020, and obtained Grade A+.

- 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, and obtained Grade A+.

- 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, obtained Grade A+.

- 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.

- International Congress on Productivity, Reliability, Optimization and Modelling (**ICPQROM**), held at the Indian Habitat Centre, Delhi, during 7-8 February 2011.

- **National Workshop on Differential Equations**, Computing and Modelling, conducted at the Department of Mathematics, University of Delhi, Delhi, during 20 - 24 December 2010.

- **Advanced Training in Mathematics for Lecturers** (**ATML**), in Real Analysis, held at the University of Delhi, India, during 22 March – 3 April 2010.

- **Advances in Mathematics**: Focus on Women in Mathematics, held at Jawaharlal Nehru University, Delhi, during 5 – 7 October 2009.

- **Summer Programme in Mathematics** (**SPIM**), at Harish Chandra Research Institute, Allahabad,   India, during 16 June - 4 July, 2008.

- **Mathematics Training and Talent Search Programme** (**M.T.T.S**), Level-II, held at RIE Mysore, Karnataka, India, during 19 May – 14 June, 2008.

- **Summer School on Mathematics learning through Instructional Workshop**, organised by Kumaon University, Nainital, Uttaranchal, India, during 7 - 16 June 2006.