

Curriculum Vitae

Dr. Shahna



Dr. Shahna has joined as an Assistant Professor in the Department of Mathematics, Jamia Millia Islamia (A Central University) New-Delhi, India on April 13, 2023. She has also been worked as an Assistant Professor (Ad-hoc) in the Department of Mathematics, Sri Venkateswara College, University of Delhi, New-Delhi, India from September 15, 2017 to December 30, 2022. She has completed her Ph.D. from Department of Mathematics, Jamia Millia Islamia, New-Delhi in Numerical Analysis. The title of Ph.D. thesis is “Numerical solution of boundary value problems using spline techniques”. She has been awarded with UGC-Maulana Azad National Fellowship (JRF & SRF) for five years during Ph.D. She has done M.Sc. Mathematics from IIT Delhi after qualifying IIT-JAM (Joint Admission Test for admission in M.Sc.). She has also qualified CSIR-NET with AIR 82 in Mathematical Sciences. She has been awarded with Gold Medal for being topper of B.Sc.(H) Mathematics for three consecutive years.

1. Name: Dr. Shahna
2. Designation: Assistant Professor
3. Office Address: Department of Mathematics,
Jamia Millia Islamia (A Central University),
New-Delhi 110025, India.
4. Telephone (Direct) (Optional):

Telephone : Extn
(Optional):

Mobile (Optional):
5. Email (Primary): shahna@jmi.ac.in Email (Secondary) :
khan.shahana5@gmail.com
6. Field(s) of Specialization: Numerical Analysis

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7. Employment Profile

Job Title	Employer	From	To
Assistant Professor	Department of Mathematics, Jamia Millia Islamia (A Central University), New-Delhi 110025, India.	April 13, 2023	Present
Assistant Professor (Ad-hoc)	Sri Venkateswara College, University of Delhi, New-Delhi 110021, India	September 15, 2017	December 30, 2022

8. Academic Qualifications (From Highest Degree to High School):

Examination	Board / University	Year	Division/ Grade	Subjects
Ph.D.	Jamia Millia Islamia	2018	79.20% (in course work)	Numerical Analysis, Research Methodology
M.Sc. Mathematics	IIT Delhi	2014	CGPA 7.62/10	Mathematics
B.Sc.(H) Mathematics	Jamia Millia Islamia	2012	85.67%	Mathematics
Intermediate (12 th)	HBSE	2009	87.20%	Physics, Chemistry, Mathematics, English, Hindi
High School (10 th)	HBSE	2007	90 %	Mathematics, Science, Social Science, Physical Education, English, Hindi

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9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To
Association-in-charge	Department of Mathematics, Sri Venkateswara College, University of Delhi, New-Delhi, India-110021.	2019	2020
Member (Equal Opportunity Cell)	Sri Venkateswara College, University of Delhi, New-Delhi, India-110021.	2021	2022
Member (Examination Committee)	Department of Mathematics, Sri Venkateswara College, University of Delhi, New-Delhi, India-110021.	2018	2022

10. Awards, Achievements, Associateships etc.

Year of Award	Name of the Achievement	Awarding Organization
2016	NET(Mathematical Sciences) with AIR 82	CSIR-UGC
2012	Qualified IIT-JAM (Joint Admission Test for M.Sc.)	IIT
2012	Gold Medal (Topper of B.Sc.(H) Mathematics for three consecutive years)	Jamia Millia Islamia (A Central University), New-Delhi 110025
2009	Excellence Certificate for scoring 100% in Mathematics.	Saraswati Senior Secondary School, Palwal Haryana-121102

11. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)
2015	Maulana Azad National Fellowship (JRF & SRF)	UGC	April/2015	September/2017
2009	Haryana Merit Scholarship for higher education	Directorate of Higher Education, Haryana	August 2009	May 2014

12. Details of Academic Work

Courses taught at Postgraduate and Undergraduate levels

- Calculus
- Geometry of Two and Three Dimensions
- Differential Equations
- LATEX and HTML
- Linear Algebra
- Multivariate Calculus
- Ring Theory and Linear Algebra-II
- CAS & Related Software

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- Numerical Methods
- Partial Differential Equations
- Linear Programming and Game Theory
- Metric Spaces

Technical Profeciency

- Languages : MATLAB, Mathematica, R, Latex, HTML, C, C++.
- Package : MS Office
- OS : Win Xp and Win7/8/10

13. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/ Schools etc. (mentioning the role)

Year	Title of Activity	Level of Event (International/ National/ Local)	Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other)	Event Organized by	Venue
2014	Conference on Algebra, Geometry, Analysis and their Applications	International	Participant	Department of Mathematics, Jamia Millia Islamia, New-Delhi, India	Department of Mathematics, Jamia Millia Islamia, New-Delhi, India
2015	Workshop on Finite Difference Methods for differential equations	International	Participant	Department of Mathematics, South Asian University, New-Delhi, India	South Asian University, New-Delhi, India
2016	International Conference on Differential Geometry, Algebra and Analysis (ICDGAA-16)	International	Presenter	Department of Mathematics, Jamia Millia Islamia, New-Delhi, India	Department of Mathematics, Jamia Millia Islamia, New-Delhi, India

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2017	International Conference on Current Trends in Theoretical and Computational Differential Equations with Applications	International	Presenter	Department of Mathematics, South Asian University, New-Delhi, India	Department of Mathematics, South Asian University, New-Delhi
2017	Workshop on Shodhganga and Anti-Plagiarism Software (URKUND)	National	Participant	Information and Library Network Centre, Jamia Millia Islamia New-Delhi, India	Jamia Millia Islamia, New-Delhi, India
2017	Workshop on How to Write and Publish Scholarly Articles	National	Participant	Dr. Zakir Hussain Library, JMI and Springer Nature, Jamia Millia Islamia, New-Delhi, India	Jamia Millia Islamia, New-Delhi, India
2018	International Conference on Modern Mathematical Methods and High Performance Computing in Science & Technology (M3HPCST-2018)	International	Presenter	Inderprastha Engineering College, Ghaziabad, UP India	Inderprastha Engineering College, Ghaziabad, UP India
2019	International Conference on Differential Equations and Control Problems-Modeling, Analysis and Computations (ICDECP-19)	International	Presenter	IIT Mandi	IIT Mandi (Himachal Pradesh), India

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2020	Workshop on Numerical Methods in Scientific Computing (IWNMSC-2020)	International	Participant	Department of Mathematics, South Asian University, New-Delhi, India.	Department of Mathematics, South Asian University, New-Delhi, India
2021	The 4 th International conference on Mathematical Modelling, Applied Analysis and Computation-2021(ICMMAAC-21)	International	Presenter	JECRC University Jaipur (Raj.) India	Virtual Platform
2022	International Conference on Dynamical Systems and Numerical Methods (ICDSNM-22)	International	Presenter	Department of Mathematics, Jamia Millia Islamia, New Delhi, India	Virtual Platform
2022	A Professional Development Program, Curriculum and Instruction on “Viewing Undergraduate Students as Inventors”	International	Participant	University of Illinois at Urbana-Champaign	Virtual Platform

14. Publications

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal (Optional)
Arshad Khan, Shahna	Non-polynomial quartic spline method for solving twelfth order boundary value problems	Proceedings of Jangjeon Mathematical Society	21	645-659	2018	0.69

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Arshad Khan, Shahna	Non-polynomial quadratic spline method for solving fourth order singularly perturbed value problems	Journal of King Saud University- Science	31	479-484	2019	3.829
Shahna , Arshad Khan	Approximations for higher order boundary value problems using non-polynomial quadratic spline based on off-step points	Journal of King Saud University- Science	31	737-745	2019	3.829
Shahna , Arshad Khan	A new algorithm for solving generalized systems of second order boundary value problems using non-polynomial spline technique	Proceedings of National Academy of Sciences India Section A- Physical Sciences	91	225-235	2021	1.291
Shahna , Talat Sultana, Arshad Khan	Non-polynomial spline solution of one dimensional singularly perturbed parabolic equations	Journal of Computational Analysis & Applications	30	312-322	2022	0.393
Shahna , Arshad Khan	A fourth order method for solving singularly perturbed boundary value problems using non-polynomial splines	Iranian Journal of Numerical Analysis and Optimization	12	483-497	2022	0.583

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Shahna, Arshad Khan	Non- polynomial cubic spline method for solution of higher order boundary value problems	Computational Methods for Differential Equations	11	225-240	2023	0.188
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