

Curriculum-Vitae

Dr. Shilpee Srivastava Saxena

Contact Information:



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Career Objective:

To strive for excellence, to work in such an environment that will enhance my knowledge and career, where I can perform my teaching and research skills according to my strong calibre and efficiency.

Personal Data:

Place of Birth: Kanpur, U.P., India
Father's Name: Sri P.K. Srivastava
Husband's Name: Mr. Gaurav Saxena
Nationality: Indian
Marital status: Married

Education:

1997-1999	HSc	U.P. Board	70.8%
1999-2001	SSc	U.P. Board	78.8%
2001-2004	BSc	C.S.J.M. University, Kanpur	75.6%
2004-2006	MSc (Maths)	C.S.J.M. University, Kanpur	67.8%
Jun 07-May 10	PhD (Maths)	BIT, Mesra, Ranchi	awarded 2012
Sep 10-Sep 11	Post Doctoral Fellow	IIT Kanpur	
Oct 11-Aug 13	Post Doctoral Fellow	IIT Delhi	

Current Employment: Working as Associate Professor in Mathematics Department (UIS) at Chandigarh University since 16 April 2022.

Professional Experience: 3 years Post PhD and 9 years, 6 Months teaching

1. **JRF** under NBHM sponsored project in the Department of Applied Mathematics, BIT, Mesra from 28 June, 2007 to 31 March, 2009.
2. **SRF** under NBHM sponsored project in the Department of Applied Mathematics, BIT, Mesra from 1st April, 2009 to June, 10 and Worked with Dr. S. Padhi, Department of Applied Mathematics, BIT, Mesra, for PhD degree on qualitative behaviour of periodic solutions of functional differential equations.
3. **PDF (NBHM)** in the department of Mathematics and Statistics IIT, Kanpur from 01 Sep, 2010 to Sep 2011 under supervision of Prof. Peeyush Chandra.
4. **PDF (NBHM)** in the Centre for Atmospheric Sciences IIT, Delhi from 01 Sep 2011 to Aug 2013 under supervision of Prof. Girija Jayaraman and Prof. S.K. Dash.
5. Assistant Professor in **PSIT Kanpur**, India from 24 Aug, 2015 to Feb 2016.
6. Assistant Professor in **BITS Pilani Dubai Campus** since 1 March, 2016-15 Jan 2021.
7. Working as freelancer. Associated with the following EdTech companies
 - 1) **Cuemath** working as Cuemath teacher partner for grades K-12.
 - 2) **Preply** working as Math instructor for all grades(international students)

Teaching Experience:

1. Taught undergraduate students for 02 years in BIT, Mesra, Ranchi.
2. Taken course of Mathematics-1, 2 of B.Tech students in PSIT Kanpur.
3. Taught courses Math I, II, III (including calculus, linear algebra, complex analysis, differential equation), statistics, discrete mathematics, Introduction to financial math in BITS Pilani Dubai campus.
4. Taught online course of Statistics for 3 years in work integrated programme offered by BITS Pilani India.
5. Guided several study and design project of Undergraduate students in BITS Pilani Dubai.
6. Taught statistics(engineering students) and Business analytics(Masters students), Business analytics lab including softwares Hadoop, Pig latin, MongoDB, Hive(Masters student) in CU, Mohali.

Research Experience:

Dissertation Adviser: Dr. Seshadev Padhi, BIT Mesra Ranchi

Dissertation Title: Contributions to the study of existence and asymptotic behaviour of periodic solutions of functional differential equations.

Research Interest: Qualitative Theory of nonautonomous differential equations, difference equation, global attractivity and periodic solutions in population dynamics, mathematical modelling, Data Analysis through Machine learning algorithms.

1. Worked with Dr. S. Padhi, Dept. of Applied Mathematics, BIT, Mesra, Ranchi in the

research project entitled "Green's function, existence and asymptotic behaviour of periodic solutions of functional differential equations" from 28.06.2007- June, 10, published 8 papers in International Journal of repute.

2. Collaborated with Prof. Chuanxi Qian, Dept. of Mathematics and Statistics, Mississippi State University, Mississippi USA and published a paper in CAA, 2008.
3. Collaborated with Prof. Julio. G. Dix, Dept. of Mathematics, Texas State Univ. At San Markos, San Markos, Texas, USA and published a paper in Pan Amer. Math. J, 2009.
4. Collaborated with Prof. John R. Graef, Dept. of Mathematics, University of Chattanooga, USA, and publish a paper in J. Neural parallel & scientific computing, 2010.
5. Collaborated with Prof. Peeyush Chandra, Dept of Mathematics & Statistics, IIT Kanpur on modelling and control of the chikungunya disease.
6. Collaborated with Prof. Girija Jayaraman, Centre for Atmospheric Sciences, IIT Delhi on Dynamical behaviour of spatio-temporal plankton population model.

Award and Recognition:

1. JRF, NBHM, Dept of Atomic Energy, Govt of India, 2007-2009.
2. SRF, NBHM, Dept of Atomic Energy, Govt of India, 2009-2010.
3. NBHM Post Doctoral Fellowship, Dept of Atomic Energy, Govt of India, 2010-2013.
4. Got selected in state Bank of India in 2008 as post of CRA.
5. Topper of the batch in PG College, MSc 2006.
6. Topper of the school in U.P. Board Intermediate exam in 2001, honoured by Kayastha Sabha
(Cleared national level exams e.g. SBI, IDBI, Aviation Research Centre, India).
7. Travel Grant to attend ICM-2010, held at Hyderabad India, August 2010.
8. Life member of Indian Mathematical Society.
9. Reviewer of mathematical database "Mathematical Reviews" of American Mathematical Society.
10. The research work done in PhD is published in the book "Periodic Solutions of First-Order Functional Differential Equations in Population Dynamics" by Padhi, Seshadev, Graef, John R., Srinivasu, P. D. N. Springer, 2014.
11. Certificate of Achievement for institution reputation building from honourable vice Chancellor, Chandigarh University, April 2023 and from honourable Chancellor in March 2024.
12. Best paper presentation award in International conference on advances in computer engineering, Communication systems and business development (ICACECSBD-2023), 26th & 27th May 2023.
13. Best paper presentation award in International conference on Technological Innovations and Advanced Computing (TIACOMP-2024), 29-30 June 2024.
14. Best paper presentation award in International conference on Artificial Intelligence and Sustainable Computing for Smart Cities (AIS2C2)(24-25 December 2025).
15. Best researcher award for the year 2024-2025 presented by Chandigarh University
16. Member of editorial board of "International Journal of Systems Science and Applied Mathematics", Science publishing group, (2016-2017), (2021-2022).

15. Reviewer of mathematical database "Mathematical Reviews" of American Mathematical Society. Since 2010.

Reviewer session chair detail:

1. International Conference on Neoteric Advancements in Analysis and Applied Mathematics (NA3M-2023)(18th - 19th December 2023)(Reviewer)
2. International Conference on Information Technology, Electronics and Intelligent Communication Systems(ICITEICS 2024)(Jun 28, 2024 - Jun 29, 2024)(Session Chair)
3. 2nd International Conference on Disruptive Technologies (ICDT-2024)(March 15th - 16th,2024)(Reviewer)
4. Advancement in Electronics & Communication Engineering, AECE -2025(21st - 22nd November 2025)(Reviewer)
5. 2nd International Conference on Artificial Intelligence & Machine Vision(AIMV 2025)(Aug 16, 2025 - Aug 17, 2025)(Reviewer)
6. 3rd IEEE International Conference on Interdisciplinary Approaches in Technology and Management for Social Innovation (IATMSI-2025)(6-8 March 2025)(Reviewer)
7. 2nd International Conference on Artificial Intelligence and Sustainable Computing for Smart Cities(AIS2C2-2025)(December 24-25, 2025)(Session Chair)
8. International Conference on Advancements in Mathematics for Sustainable Future (ICAMSF-2025)(11-12 Sep 2025)(Reviewer)
9. 13th IEEE Conference on Systems, Process & Control(ICSPC2025)(5-6 Dec, 2025)(Reviewer)
10. 11th IEEE International Conference on Automatic Control and Intelligent Systems(I2CACIS2026)(26-27 June,2026)(Reviewer)
11. World Conference on Computational Science and Technology(WcCST-2026)(26-27 March, 2026)(Reviewer)(Session Chair)
12. 2026 Eighth International Conference on Computational Intelligence and Communication Technologies (24-25 April, 2026)(Reviewer)
13. Reviewer of IEEE Xplore, Since 2024

Cultural or other activities:

1. Won many prizes in essay writing, drawing competition, sports at school level, consolation prizes for drawing competition at city level, participated in cultural activities and sports during PhD and in professorship at BITS Pilani Dubai Campus and Chandigarh University.
2. Committee member of analytical skills(2017-18) in General Science department, BITS Pilani, Dubai.
3. Organized 2 workshops as Coordinator on analytical skills in BPDC in 2017-18.
4. Member of Library committee in BPDC 2018-19.
5. Member of Research committee (General Sciences dept.) in BPDC in 2020.
6. Worked as PS Faculty for two semesters in BITS Pilani Dubai during my professorship. The role is to visit the companies in Dubai to evaluate students' performance working as trainee in those companies.
7. Organized online MATLAB/Octave workshop for beginners in July 2020 at BITS Pilani Dubai.

8. Instructor incharge of the courses taught in BPDC.
9. ORM(Online reputation management) coordinator at Chandigarh University, since June 2022
10. SPOC for international partner University and international students in Mathematics dept. from Jan 2023 at CU.
11. Moderator and organizing committee member in the sessions of International Conference on “Neoteric Advancements in Analysis and Applied Mathematics (18-19 Dec 2023, 11-12 Sep, 2025) organized by department of Mathematics, Chandigarh university.
12. Coordinator of the Mathematical Society (CU Mathematical Society) of Mathematics department Chandigarh University.
13. Organized National Mathematics day 2024 and Researchers’ Meet 2025.
14. Organized National Mathematics day 2025.
15. Organized Researcher meet 2026 and Indian Mathematical Society sponsored Lecture

Computer literacy and awareness:

One year diploma in computers from Excel net, India with courses; MS Office, DTP, languages; C++, Java, HTML.

Softwares known: Matlab, latex, SPSS, R, Short term certificate course of Python.

Research Publications:

- [1] (with S.Padhi) Multiple periodic solutions for a nonlinear first order functional differential equations with applications to population dynamics, Applied Mathematics and Computation 203(1) (2008), 1-6.
- [2] (with S.Padhi, Chuanxi Qian) Multiple periodic solutions for a first order nonlinear functional differential equation with applications to population dynamics, Communications in Applied Analysis, 12(2008), no. 3, 341-352.
- [3] (with S.Padhi, Julio Dix) Existence of three nonnegative periodic solutions for functional differential equations and applications to hematopoiesis, Pan American Mathematical Journal, vol 19(1) (2009), 27-36.
- [4] (with S.Padhi) Existence of three periodic solutions for a nonlinear first order functional differential equation, Journal of Franklin Institute, 346(2009),818-829.
- [5] (with S.Padhi and Smita Pati) Multiple positive periodic solutions for nonlinear first order functional difference equations, International Journal of Dynamical Systems and Differential Equations, 2(1&2), 98-114.
- [6] (with S.Padhi, Smita Pati) Three periodic solutions for a nonlinear first order functional differential equations, Applied Mathematics and Computation, 216(2010), 2450-2456.
- [7] (with S.Padhi and Smita Pati) Positive periodic solutions for first order functional differential equations, Communications in Applied Analysis, 14(2010), no.4, 447-462.
- [8] (with S. Padhi and John R Graef) Dynamics for a fishing model, Journal of Neural Parallel Sci. Comput. 18 (2010), no. 1, 109-120.

- [9] (Shilpee Srivastava) Periodic solutions of delayed difference equations, *Bulletin of Mathematical Analysis and Application* 4(3) (2012)1-11.
- [10] (With Ribhika) Prime video insightful recommender system: Unraveling patterns with TF-IDF and cosine similarity. *Journal of Information & Optimization Sciences*, Vol. 46 (2025), No. 3, pp. 793–802.
- [11] Shilpee Srivastava, Periodic Solutions of Functional Difference Equations, *International Journal of Mathematics Trends and Technology* 67.2 (2021):36-42.
- [12] Saxena, G., & S. Srivastava, A New Ant Colony Algorithm for Traveling Salesman Problem with Negative Weight Edges, *Mathematical Statistician and Engineering Applications*, ISSN: 2094-0343,2326-9865, Page Number: 1560-1565, Publication Issue:Vol. 72 No. 1 (2023).
- [13] Jaspreet Minz, Shilpee Srivastava, Review of Artificial Intelligence in Medical Field, *Eur. Chem. Bull.* 2023, 12 (Special Issue 4), 16833-16844.
- [14] Yadav, N., & Srivastava, S. (2024, September). Validation of Sophisticated Machine Learning Model for Early Detection of Acute Kidney Injury. In *2024 International Conference on Advances in Computing Research on Science Engineering and Technology (ACROSET)* (pp. 1-6). IEEE.
- [15] Bist, A., Singh, G., & Srivastava, S. (2024, September). Transformative Potential of Consumer Insights into Sustainable Business Growth: Machine Learning Integrated with Marketing Analytics. In *2024 4th International Conference on Soft Computing for Security Applications (ICSCSA)* (pp. 1-6). IEEE.
- [16] Prakash, N. K., & Srivastava, S. Exploring the Effectiveness of Ensemble Learning Techniques for the Classification of Stellar Objects in Gaia DR3. In *Recent Advances in Science, Engineering & Technology* (pp. 268-275). CRC Press., 2024.
- [17] Yadav, N., Srivastava, S., Sriwastav, N., & Torgal, S. (2024, April). Blood Clot Image Segmentation Using Segment Anything Model. In *2024 5th International Conference on Recent Trends in Computer Science and Technology (ICRTCST)* (pp. 476-481). IEEE.
- [18] Manisha, M., Srivastava, S., & John, D. P. (2024, January). Heart Disease Predication Using Various Machine Learning Algorithms. In *2024 International Conference on Healthcare Innovations, Software and Engineering Technologies (HISSET)* (pp. 422-428). IEEE.
- [19] Raje, V. V., Mohite, R. V., Srivastava, S., Lipi, K., Gavhane, Y., & Devi, T. J. (2024, January). Data security and Privacy in the smart healthcare system. In *2024 International Conference on Healthcare Innovations, Software and Engineering Technologies (HISSET)* (pp. 204-206). IEEE.
- [20] Kour, S., Srivastava, S., & Kakde, S. V. (2024, January). Impact of Blockchain in Healthcare: A Comprehensive Study. In *2024 International Conference on Healthcare Innovations, Software and Engineering Technologies (HISSET)* (pp. 326-330). IEEE.
- [21] Debnath, H., Srivastava, S., & Jha, K. K. (2024, June). Forecasting Financial Frontiers: A Comparative Analysis of LSTM-Based Stock Price Prediction for Meta and Tesla. In *2024 First International Conference on Technological Innovations and Advance Computing (TIACOMP)* (pp. 1-4). IEEE.
- [22] Dhawan, S., Kumar, K., & Srivastava, S. (2024, June). An Enhancement Of Online Drug Recommendation System Using BGFT-DBi-LSTM And PRFFC Approaches. In *2024 First International Conference on Technological Innovations and Advance Computing (TIACOMP)* (pp. 403-413). IEEE.

- [23] S. P. Sriramoju and S. Srivastava, (2024) "Enhanced Glioma Disease Prediction Through Ensemble-Optimized Machine Learning," *2024 International Conference on Communication, Computer Sciences and Engineering (IC3SE)*, Gautam Buddha Nagar, India, pp. 460-465. IEEE.
- [24] Tariq, S., & Shrivastava, S. (2024, July). Harnessing Big Data to Revolutionize Urban Public Transit. In *2024 International Conference on Emerging Trends in Networks and Computer Communications (ETNCC)* (pp. 1-7). IEEE.
- [25] Chauhan¹, Prince, and Shilpee Srivastava. "Comparative Analysis of Deep Learning and Machine Learning Techniques for Obesity Classification." *Proceedings of the International Conference on Recent Advancement and Modernization in Sustainable Intelligent Technologies & Applications (RAMSITA-2025)*. Springer Nature, 2025.

Patent :

16 national patents published and 2 UK patents granted.

1. 202311040968: (16/06/2023) : IOT based automated plant water system
2. UK design patent granted "Design number: 6304969", "DRUG DELIVERY DEVICE", Sep 2023.
3. UK design patent granted "Design number: 6304957", "SMART WEARABLE HEALTH MONITORING DEVICE", Sep 2023.
4. India Patent published "application no. 202411029023", "Intelligent monitoring of papaya trees using IOT-Based sensors. May 2024.
5. 202411035750: (17/05/2024): Herbal mehndi stick for hair colour".
6. 202411043484: (21/06/2024): Feature selection in sentiment analysis of news feed via simulated annealing
7. 202411064172: (13/09/2024): Method and system for multicriteria decision making
8. 202411086331:(22/11/2024):Hybrid PSO-SA algorithm for feature selection in social media sentiment analysis
9. 202511010855: (21/02/2025):QNS-Based Dijkstra's algorithm for shortest path solutions
10. 202511014159: (7/03/2025): Deep learning based edge detection for vehicle registration recognition
11. 202511033663: (25/04 2025): Optimizing Quadri-Partitioned Neutrosophic Transport Routes for Multi-Attribute Decision-Making
12. 202511035400: (25/04/2025): Analytical Design and Energy Calibration of Sri Yantra
13. 202511052954: (13/06/25): Enhanced quadripartitioned neutrosophic dijkstra's system and method for optimal route selection
14. 202511054255:(20/06/2025):Temperature regulated overhead water tank with integrated insulation
15. 202511082814: (19/09/25): Systems and methods for real time HER monitoring with streaming analytics, federated learning, and clinician alligned explainability
16. 202511087141: (3/10/2025):Methods and systems for using weighted decision fusion of acoustic and structural MRI features.
17. 202511093909: (14/11/2025): Dual layer multimodal continuous biometric authentication system and method integrating facial recognition and hand gesture recognition.
18. 202511112366:(02/01/2026): Intelligent OCR with multilingual support
19. 202511125184:(23/01/2026): Compact single-feed microstrip antenna for rfid reader applications in the ism band

Papers presented and Conferences Attended:

1. Participated in the Instructional school on existence and global attractivity of periodic solutions of functional differential equations with application to population dynamics, held in Department of Applied Mathematics, Birla Institute of Technology, Mesra, Ranchi, 9-23 June, 2008.
 2. Attended a national workshop cum training programme on advanced numerical techniques and applications on June 29 - July 11, 2009 held in BHU and presented a paper.
 3. National conference on mathematical modelling and simulation, held on Jan 9-11, 2009 Jointly organized by Jiwaji University, Gwalior, ABV-IIITM, Gwalior and presented a paper on Existence of multiple periodic solutions of a fishing model.
 4. Attended International Congress of Mathematics (ICM), Aug 19-27, 2010 held in Hyderabad.
 5. Attended 76th annual conference of Indian Mathematical Society, Dec 27-30, 2010 held in SVNIT Surat and presented a paper.
 6. Participated in workshop on "Stability & bifurcation analysis and pattern formation in mathematical ecology and epidemiology" Feb. 25 - March 02, 2011 held in department of Mathematics and Statistics, I.I.T. Kanpur.
 7. Attended National Seminar on "Recent Advances in Mathematics and its Applications", February 12, 2011 held in BND College, Kanpur and presented a paper.
 8. Attended "A National conference on mathematical modelling and computer simulation" July-07-July-09-2011 held in Bhabha Institute of Technology, Kanpur under auspices of ISMMACS and presented a paper.
 9. Attended "The 77th Annual Conference of the Indian Mathematical Society" Dec-27-30, 2011 held in SRTM University, Nanded and presented a paper.
 10. Attended "An international event on Nonlinear Functional Analysis" Jan 18-20, 2012 held in IMSc, Chennai in the honour of 60th b'day of Prof. Kesavan.
 11. Attended "National programme on differential equations theory, computation and applications" May 14-June 02, 2012, organised by department of Mathematics, IIT Delhi.
 12. Attended "Workshop on effective teaching and learning", 12-14 March, 2016, organised by BITS Pilani, Dubai Campus.
- Gave a seminar on "short tricks for aptitude" in BPDC to BPDC students (Oct, 2017)
13. Participated and presented the paper in Ist Sharjah International Mathematics spring school (PDE and numerical analysis) held in University of Sharjah, UAE (March 25-27, 2018)
 14. Gave **Invited talk** (presented paper) in International conference on differential equation and control problems in IIT Mandi, HP, India 17-19 June, 2019.
 15. Attended online Research Seminar: 'Statistical Analysis of COVID-19' organized by Middlesex University Dubai in April 2020.

16. Attended webinar on “Teaching Data Analysis & Visualization Online” Dated June 23, 2020 organized by MathWorks.
17. Attended IFDP on 5th July, 2022 at Chandigarh University.
18. Attended one week faculty development program on “Mathematical Foundation for Engineers”, from 25-30 July 2022 at Chandigarh University.
19. Paper presented in International conference on Technological Innovations and Advanced Computing (TIACOMP-2024), 29-30 June 2024.
20. Paper presented in National symposium in IIT Ropar, Feb 2025.
21. Paper presented in 2nd International Conference on Artificial Intelligence and Sustainable Computing for Smart Cities(AIS2C2-2025)(December 24-25, 2025)

References:

(1) Dr. T.K. Dutta(Retd.)
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(2) Prof. Peeyush Chandra(Retd.)
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Indian Institute of Technology, Kanpur
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(3) Prof. S.Padhi
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(4) Prof. Girija Jayaraman (Retd. IIT Delhi)
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