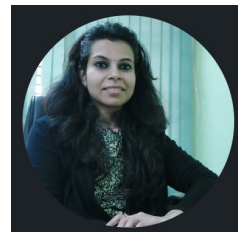


# Curriculum Vitae

**SAKSHI DHALL**

E-mail : [sdhall@jmi.ac.in](mailto:sdhall@jmi.ac.in), [sakshidhall@gmail.com](mailto:sakshidhall@gmail.com)



- *Assistant Professor (Computer Science), Department of Mathematics, Jamia Millia Islamia (A Central University), N. Delhi, India since July 2013.*
- *Awarded Commendable Research Award for Excellence in Research (during year 2018) by Delhi Technological University, Delhi.*
- *University Topper and Gold Medalist in U.G. and P.G. (University of Delhi, Delhi, India).*
- *Sincere, dedicated, hardworking and highly motivated individual.*
- *Strongly inclined towards academics and research.*

## **Personal Profile**

Date of Birth : 19<sup>th</sup> February 1987  
Nationality : Indian

## **Academic Record**

Degree	Year	Board/ University	Institute	Score
Ph. D. (Title: Development & Analysis of Cryptographic Schemes for Visual Content)	2020	Delhi Technological University, Delhi, India	Department of Computer Science and Computer Engineering	<b>CGPA:</b> 9 out of 10 (in course work)
Master of Computer Applications (M.C.A.)	2010	University of Delhi, Delhi, India	Department of Computer Science	92.46%
B.Sc. (Hons.) Physics	2007	University of Delhi, Delhi, India	Hansraj College	91.7%
AISSE (12 <sup>th</sup> )	2004	CBSE, India	Sanatan Dharam Public School	87.8%
AISSE (10 <sup>th</sup> )	2002	CBSE, India	Sanatan Dharam Public School	82.8%

## Publications

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1. Mohd Javaid, Abid Haleem, Ravi Pratap Singh, **Sakshi Dhall**, “Role of Virtual Reality in advancing education with sustainability and identification of Additive Manufacturing as its cost-effective enabler,” *Sustainable Futures*, vol. 8, 100324, December 2024, doi: <https://doi.org/10.1016/j.sftr.2024.100324>. (ESCI, Impact Factor: 3.3)
2. **Sakshi Dhall**, Khushboo Yadav, “Cryptanalysis of substitution-permutation network based image encryption schemes: a systematic review,” *Nonlinear Dynamics*, vol. 112, pp. 14719-14744, June 2024, doi: <https://doi.org/10.1007/s11071-024-09816-0>. (SCIE, Impact Factor: 5.2)
3. Raju Vaishya, **Sakshi Dhall**, Abhishek Vaish, “Artificial Intelligence (AI): A potential game changer in Regenerative Orthopaedics - A Scoping Review”, *Indian Journal of Orthopaedics*, vol. 58, pp. 1362-1374, June 2024, doi: <https://doi.org/10.1007/s43465-024-01189-1>. (SCIE, Impact Factor: 1.1)
4. **Sakshi Dhall**, Abhishek Vaish, Raju Vaishya, “Machine learning and deep learning for the diagnosis and treatment of ankylosing spondylitis- a scoping review,” *Journal of Clinical Orthopaedics and Trauma*, vol. 52, 102421, May 2024, doi: <https://doi.org/10.1016/j.jcot.2024.102421>. (SCOPUS, Cite Score: 4.3)
5. **Sakshi Dhall**, Khushboo Yadav, “Identifying weak designs for cryptanalysis of Substitution-Permutation Network-based Encryption Schemes,” *International Conference on Analysis and its Applications (ICAA-2024)*, January 19-21, 2024, Jamia Millia Islamia, Delhi, India, abstract published in the proceedings.
6. **Sakshi Dhall**, Shanay Rab, Saibal K. Pal, Mohd Javaid, Abid Ali Khan, Abid Haleem, “Identifying the feasibility of ‘travelator roads’ for modern-era sustainable transportation and its prototyping using additive manufacturing,” *Sustainable Operations and Computers*, vol. 4, pp. 119-129, August 2023, doi, <https://doi.org/10.1016/j.susoc.2023.08.001>. (SCOPUS, Cite Score: 18.2)
7. Sanjay Kumar, Akshi Kumar, Abhishek Mallik, **Sakshi Dhall**, “Opinion Leader Detection in Asian Social Networks using Modified Spider Monkey Optimization,” *ACM Transactions on Asian and Low-Resource Language Information Processing*, vol. 22(5), Article 150, pp. 1-26 , May 2023, doi: <https://doi.org/10.1145/3555311>. (SCIE, Impact Factor: 1.8)
8. **Sakshi Dhall**, Saibal K. Pal, Kapil Sharma, “A chaos-based probabilistic block cipher for image encryption,” *Journal of King Saud University-Computer and Information Sciences*, vol. 34(1), pp. 1533-1543, 2022. doi: <https://doi.org/10.1016/j.jksuci.2018.09.015>. (SCIE, Impact Factor: 5.2)
9. **Sakshi Dhall**, Ashutosh Dhar Dwivedi, Saibal K. Pal, and Gautam Srivastava, “Blockchain-based Framework for Reducing Fake or Vicious News Spread on Social Media/Messaging Platforms,” *ACM Transactions on Asian and Low-Resource Language Information Processing. Process.*, vol. 21(1), Article 8, pp 1-33, January 2022. doi: <https://doi.org/10.1145/3467019>. (SCIE, Impact Factor: 1.8)
10. Ashutosh Dhar Dwivedi, Rajani Singh, **Sakshi Dhall**, Gautam Srivastava, Saibal K. Pal, “Tracing the Source of Fake News using a Scalable Blockchain Distributed Network,” in Proc. *2020 IEEE 17th International Conference on Mobile Ad Hoc and Sensor Systems (MASS)*, Greater Noida Extension Center (GNEC), Indian Institute of Technology Roorkee, Delhi NCR, India, 2020. (Available on IEEE Xplore).

11. **Sakshi Dhall**, Saibal K. Pal, Kapil Sharma, “A Chaos-based Multi-level Dynamic Framework for Image Encryption,” in *Internet of Things (IoT)*, M. Alam, K. Shakil, S. Khan, Eds., Cham, Springer, 2020, pp. 189-217, doi: [https://doi.org/10.1007/978-3-030-37468-6\\_10](https://doi.org/10.1007/978-3-030-37468-6_10).
12. **Sakshi Dhall**, Saibal K. Pal, Kapil Sharma, “Cryptanalysis of image encryption scheme based on a new 1D chaotic system,” *Signal Processing*, vol. 146, pp. 22-32, 2018, doi: <https://doi.org/10.1016/j.sigpro.2017.12.021>.(SCIE, Impact Factor: 3.4)
13. **Sakshi Dhall**, Saibal K. Pal, Kapil Sharma, “A new chaotic-primitive and its application in customizing AES for lightweight multimedia encryption,” in Proc. *3rd International Conference on Computing for Sustainable Global Development 2016 (10th INDIACom)*, 2016, pp. 607-612. (Available on IEEE Xplore).
14. **Sakshi Dhall**, Saibal K. Pal, Kapil Sharma, “Improved Block Cipher Customized for Multimedia Security,” In Proc. *6<sup>th</sup> IEEE Power India International Conference 2014*, 2014. (Available on IEEE Xplore).
15. **Sakshi Dhall**, Saibal K. Pal, Kapil Sharma, “New Primitive for Multimedia Encryption using Chaos, Concepts of Rough Sets and Rule-based Decision Making,” *ICM 2014*, 2014, Coex, Seoul, Korea, abstract published in the proceedings.
16. **Sakshi Dhall**, Saibal K. Pal, K. Sharma, “Cryptographic Primitives for Multimedia Security,” *AISC special issue B of INROADS International Journal of Jaipur National University*, vol. 3, no. 1, pp-335-339, 2014.
17. Bhavya Bhatia, **Sakshi Dhall**, Saibal K. Pal, “Image Encryption using 3D Chaotic Maps,” *1st International Conference on Innovative Advancements in Engineering and Technology (IAET-2014)*, Jaipur National University, 2014, Jaipur, Rajasthan, India, abstract published in the proceedings.
18. **Sakshi Dhall**, Saibal K. Pal, Kapil Sharma, “New Lightweight Conditional Encryption Schemes for Multimedia,” in Proc. *3<sup>rd</sup> International Conference on Soft Computing for Problem Solving, Advances in Intelligent Systems and Computing*, Springer, vol. 258, pp 365-377, 2014.
19. **Sakshi Dhall**, Saibal K. Pal, “Design of a New Block Cipher based on Conditional Encryption,” in Proc. *ITNG 2010*, 2010, Las Vegas, Nevada, USA, IEEE Computer Society/CPS (IEEE Conference Publishing Services), issue date April 2010, pp. 714-718. (Available on IEEE Xplore)
20. Saibal K. Pal, **Sakshi Dhall**, Swekriti Sharma, “Design of Lightweight Algorithms for Media Security,” in Proc. *International Conference on Data Management (ICDM 2009)*, Advances in Communication Network and Security, MacMillan Publications, pp. 231-239, 2009.
21. **Sakshi Dhall**, Saibal K. Pal, Swekriti Sharma, “Improved Media Security Using Customized Standard Encryption Schemes,” in Proc. *IEEE International Advance Computing Conference (IACC 2009)*, pp. 800-805, 2009. (Available on IEEE Xplore).

### Academic Achievements

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- Awarded **Commendable Research Award for Excellence in Research (during year 2018)** by Delhi Technological University, Delhi.
- Mentor Fellow in one of the **Women in STEM Roadshow Workshops** under the **US Department of State** held in February 2018 at Jamia Millia Islamia organized by The Ohio State University, Ohio, USA.
- Qualified **UGC-NET with JRF (June 2012)**

- Secured **99.37** percentile in **GATE – 2011**.
- Awarded **University Gold Medal** for being **best candidate in MCA, University of Delhi**.
- Awarded **University Gold Medal** for being **best candidate in BSc. (Hons.) Physics, University of Delhi**.
- Awarded **Hansraj College Gold Medal** for being **top ranker in BSc. (Hons.) Physics, University of Delhi**.
- Awarded **certificate of merit** for securing **I<sup>st</sup> position** in the **University of Delhi in I<sup>st</sup> and III<sup>rd</sup> year** of graduation.
- Awarded **Smt. Sudarshna Bahri Prize** at Hansraj College for academic excellence (2006-2007).
- Awarded **Sh. Lajwanti & Rajrani Prize** at Hansraj College for academic excellence (2004-2005).
- Awarded **certificate of merit** for being placed in **National top 1% in National Graduate Physics Examination 2006-2007 (At Degree Level)** by Indian Association of Physics Teachers.
- Awarded **certificate of merit --- National Mathematics Olympiad contest – A- level 2000**.
- Regular recipient of **scholarships & certificates of merit** at school & college level.

## Experience

### Current Employment

**Employer** : Jamia Millia Islamia (A Central University)  
**Designation** : Assistant Professor (Computer Science), Department of Mathematics  
**Experience** : 11+ years (Since July 2013, continuing)  
**Subjects taught (to UG/PG)** : Information Security, Data Structures, Operating Systems, DBMS, Software Engineering, C Programming, Computer Fundamentals.

### Previous Employments

S. No.	Employer	Designation	Experience	Nature of Duties	Technology
1.	National Informatics Centre (NIC), Govt. of India	Scientific Officer-SB	2 years & 2 months (May 2011- July 2013)	Web Application Development and Maintenance, Faculty for conducting training for grass-root level users across the country, Leading team of 7 members, Requirement and Design Impact Analysis, Documentation (SRS, Test Cases etc.)	Java, JSP, PostgreSQL
2.	Aricent Technologies (Cisco Offshore Development Centre), Gurgaon, Haryana, India	Software Engineer	11 months (June 2010 - May 2011)	Software development and maintenance for Cisco proprietary product – SIGTRAN enabled STP (Signal Transfer Point).	C

## **Training & Internship**

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**Internship : Four months** internship at **Aricent Technologies, Gurgaon** on project focusing on SIGTRAN enabled STP.

**Training : Two months** training in **Mtree Software Private Ltd. Noida**, worked on design and development of QualNet QA Testing Automation Tool.

## **References**

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<b>S. No.</b>	<b>Referee</b>	<b>Email</b>
1.	Prof. Neelima Gupta Department of Computer Science, University of Delhi, Delhi, India	<a href="mailto:ngupta.cs.du@gmail.com">ngupta.cs.du@gmail.com</a>
2.	Dr. Saibal. K. Pal Senior Research Scientist Defense Research and Development Organization (DRDO), Delhi, India	<a href="mailto:skptech@yahoo.com">skptech@yahoo.com</a>

**Sakshi Dhall**  
**(15.11.2024)**