

DR. SABA KHANUM

Ph.D. | Assistant Professor, Maharaja Surajmal Institute of Technology, GGSIPU, New Delhi
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ACADEMIC PROFILE

Ph.D. holder in Computer Science (Jamia Millia Islamia, 2024) with 13+ years of teaching and research experience in Blockchain Security, Information Security, and Ad-hoc Networks. Author of peer-reviewed journal and conference publications (SCIE/Scopus-indexed), a granted patent, and multiple book chapters, with demonstrated impact recognised through a Wiley most-cited paper acknowledgement and a Best Research Paper Award (ICICSD 2023). Committed to advancing niche, high-quality research and academic excellence.

RESEARCH INTERESTS

- Blockchain Applications & Security
- Information & Cryptographic Security
- Ad-hoc and Vehicular Networks

EDUCATION

- **Ph.D. in Computer Science** — Jamia Millia Islamia, New Delhi (Awarded, Dec 2024)
- **M.Tech in Computer Science & Engineering** — NCCE, Israna, Kurukshetra University — CGPA 8.8
- **B.Tech in Computer Science & Engineering** — NCCE, Israna, Kurukshetra University — 75.6%

HONORS, AWARDS & QUALIFYING EXAMINATIONS

- GATE – 2018; UGC-NET – 2019
- Best Research Paper Award, International Conference on Intelligent Computing for Sustainable Development (ICICSD 2023)
- Research Excellence Certificate, MSIT (2023)
- Recognised by Wiley for one of the most-cited papers (2023)
- Multi-Dimension Faculty Certificate, MSIT (2014)

PROFESSIONAL EXPERIENCE

- **Assistant Professor, MSIT, GGSIPU, New Delhi** — 6 August 2012 to Present (13+ years)
- **Ad-hoc Faculty, MSIT, New Delhi** — January 2012 to May 2012 (5 months)

Subjects Taught: Discrete Mathematics, Artificial Intelligence, Computer Architecture and Organization, Microprocessor and Microcontroller, Database Management System, Computer Networks.

PUBLICATIONS

Journal Publications

- Khanum, S., et al. (2025). *Prioritization and Meta-Heuristic Approach for Efficient Congestion Control in Vehicular Ad Hoc Networks (VANETs)*. International Journal of Information Technology. (Scopus)
- Khanum, S., & Mustafa, K. (2023). *A systematic literature review on sensitive data protection in blockchain applications*. Concurrency and Computation: Practice and Experience, 35(1), e7422. (SCIE)
- Khanum, S., & Mustafa, K. (2023). *A lattice-based blind ring signature scheme for sensitive data protection in blockchain applications*. Concurrency and Computation: Practice and Experience, 35(26), e7835. (SCIE)

- Khanum, S., et al. (2016). *Electronic Health Record Storage and Interoperability: Archetype Based Solution*. International Journal of Control Theory and Applications, 9(42), 159–167. (Scopus)
- Khanum, S., Sharma, B., & Beniwal, G. (2016). *Hybrid Public Key Cryptosystem Combining RSA and DES Algorithm*. Int. J. of Innovations in Engineering and Technology, 7(3), 466–471.
- Khanum, S., & Ujjwal, M. *Vehicle Register Management System Using Blockchain*. Journal of Multi-Disciplinary Engineering Technologies, 13(1).
- Khanum, S., & Beniwal, G. (2021). *Distributed and Serverless Peer-to-Peer Chat Application on IPFS*. International Journal of Innovations in Engineering and Technology, 20(3).
- Khanum, S., & Kalra, I. (2019). *Implementation and Analysis of Key Reinstallation Attack*. International Journal of Innovations in Engineering and Technology, 13(3).
- Khanum, S. (2005). *Effectiveness and Quantification of Research Articles and Research Authors through Indexes and Metrics*. Evaluation, 8.

Conference Publications (Scopus-Indexed)

- Khanum, S., Sharma, S., & Kumar, A. (2026). *HIVVE: Real-Time Job Matching Platform*. In Data Processing and Networking (ICDPN 2025), LNNS vol. 1934. Springer, Cham.
- Khanum, S., & Mustafa, K. (2024). *Bequeathing the Blockchain Wallet in Public Blockchain: Securing Wallet Sensitive Data*. In Intelligent Computing for Sustainable Development (ICICSD 2023), CCIS vol. 2121. Springer, Cham. — Best Paper Award
- Khanum, S., Bisht, D., Kashyap, K., & Mehta, M. (2023). *Vulnerability Assessment of Cryptocurrency Wallet and Exchange Websites*. In Mobile Radio Communications and 5G Networks, LNNS vol. 588. Springer, Singapore.
- Khanum, S., & Mustafa, K. (2023). *Exposure of Sensitive Data Through Blockchain Wallets: A Comparative Analysis*. In Int'l Conference on Innovative Computing and Communications, LNNS vol. 473. Springer, Singapore.
- Khanum, S., & Mustafa, K. (2023). *Sensitive Data Protection at Blockchain Endpoints and Transactions*. 2022 OPJU International Technology Conference (OTCON), Raigarh, pp. 1–6. doi:10.1109/OTCON56053.2023.10113931
- Sharma, S., & Khanum, S. (2022). *Performance Analysis of SHA 2 and SHA 3*. Int'l Conference on Innovative Computing & Communication (ICICC).
- Khanum, S., Pahal, S., Makkad, A., Panwar, A., & Panwar, A. (2019). *Securing Onion Routing Against Correlation Attacks*. In Applications of AI Techniques in Engineering (SIGMA 2018), Vol. 1, pp. 573–580. Springer, Singapore.

Book Chapters

- Noor, M. A. F., Khanum, S., Anwar, T., & Ansari, M. (2021). *A Holistic View on Blockchain and Its Issues*. In Blockchain Applications in IoT Security (pp. 21–44). IGI Global. (Scopus)
- Pushker, P., & Khanum, S. (2026). *Next-Generation Artificial Intelligence: Convergence of Neuroscience, Edge Computing, and Sustainable Technologies* (1st ed.). CRC Press. doi:10.1201/9781003685890

Book Published

- Khanum, S., & Rathee, T. (2024). *Principles of Management for Engineering*. GGSIPU Mandatory Course Book, IIP Delhi.

Patent

- **Decentralized Blockchain-Based Multi-Chain Data Synchronization for IoT Smart Manufacturing** — Published 21 May 2021.

PAPERS PRESENTED AT CONFERENCES

- "High-Throughput Real-Time Leaderboard: A Comparative Performance Analysis of PostgreSQL and Redis" — ICCTDA 2025, Duy Tan University, Da Nang, Vietnam (online), Nov 2025.
- "A Novel Approach on Blockchain-Based E-Voting System with Stealth Address and Blind Signature" — ICACIA 2025, IITM, Janakpuri, New Delhi (offline), Nov 2025.

- "HIVVE: Comparative Study and Implementation of a Real-Time Job Matching Platform" — ICDPN 2025, VŠTE Czech Republic / Slovak University of Agriculture / Igor Sikorsky Kyiv Polytechnic Institute / Mata Sundri College, DU / Canadian Institute of Technology, Albania (online), Nov 2025.
- "Performance Analysis of SHA 2 and SHA 3" — ICICC.
- "EIGRP and OSPF Comparative Analysis in N/W Border Patrolling" — BVICAM International Conference, BVP, Delhi, 2018.
- "Secure Onion Routing Against Correlation Attack" — SIGMA International Conference, NSIT, Delhi, 2018.
- "Position Based Routing in Vehicular Ad-hoc Routing Network" — BVICAM International Conference, BVP, Delhi, 2017.
- "QoS Parameter Analysis on AODV and DSDV Protocol for MANETs" — UGC-Sponsored National Seminar on IT & ICT, 26–27 March 2011.

EXPERT LECTURE DELIVERED

- **Resource Person, "Developing Decentralized Applications (dApp): A Hands-on Approach to Blockchain Applications"** workshop, IITM, New Delhi — February 9, 2026 Stage Host, ICAIA Conference, MSIT (February 2024).
- **Expert Session, Cybersecurity & Digital Forensics Certificate Course**, Center of Excellence Cybersecurity, K.R. Mangalam University (in association with Elnital24) — March 28–May 2, 2026.
- Delivered an invited expert lecture on **"AI Securities and Ethics Practices (AISEP)"** at the FDP organized by Electronics & ICT Academy, IIT Roorkee (April 2025); received a Certificate of Appreciation for the contribution.

ACADEMIC & ADMINISTRATIVE RESPONSIBILITIES

- Stage Host, ICAIA Conference, MSIT (February 2024)
- Stage Host, NCRATES Conference, MSIT (November 2025)
- Publication Team Member, ICAIA Conference (2025)
- MR, College ISO Team; Auditee, ISO Audit (May 2024.May 2023)
- ISO Representative, IT Department – 2nd Shift (since 2021)
- Lead, Time-Table Committee (2021–2022)
- Prior committee involvement: AICTE, Disaster Management, Alumni Cell, Placement Cell

FACULTY DEVELOPMENT PROGRAMS & CERTIFICATIONS

- Cyber Security (ICT-based), Feb 2024
- Blended Learning and Flipped Classroom, NITTTR, Oct 2023
- Recent Advancements in Machine Learning and AI, MSIT, Feb 2023
- Use of Tools and Techniques in Research-Based Projects, GNIOT, Oct 2022
- Cryptography for Network Security, NITTTR, May 2021
- Cyber Threats and Security Measures, NITTTR, July 2021
- Industrial Training Programme on Data Science, Brain Mentors, Nov 2021
- Blockchain and Machine Learning, ATAL – Gurukula Kangri Vishwavidyalaya, June–July 2020
- Blockchain Technology (multiple FDPs) — Delhi Technical Campus, NIT Nagaland, EDULABX, NPTI, AICTE (2020)
- Software Testing (NPTEL-AICTE Swayam, 4 weeks); Faculty Induction Program (TLC Ramanujan College, DU, 1 month)

PROFESSIONAL MEMBERSHIP

- Indian Society for Technical Education (ISTE)