



# Dr. Daya Sagar Gupta

## Assistant Professor

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### Computer Science and Engineering

#### Teaching

Cryptography and Network Security

Data Structure and Algorithm

Operating Systems

Computer Programming

Computer Architecture

Compiler Design

Management Information System

Modern Cryptology

#### Research

Cryptography and Information Security

Post-Quantum Cryptography

Blockchain

Internet of Things

#### Publications (Top 5)



dayasagar@iitmandi.ac.in

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- **Daya Sagar Gupta**, Arijit Karati, Walid Saad and Daniel Benevides da Costa, “Quantum-Defended Blockchain-Assisted Data Authentication Protocol for Internet of Vehicles”, IEEE Transactions on Vehicular Technology, Vol. 71, No. 3, pp. 3255 - 3266, 2022
  - **Daya Sagar Gupta**, Sangram Ray, Tajinder Singh, and Madhu Kumari, “Post-quantum lightweight identity-based two-party authenticated key exchange protocol for Internet of Vehicles with probable security”, Computer Communications, Vol. 181, pp. 69–79, 2022
  - Pooja Verma and **Daya Sagar Gupta**, “A Pairing-free Data Authentication and Aggregation Mechanism for Intelligent Healthcare System”, Computer Communications, Vol. 198, pp. 282–296, 2023
  - **Daya Sagar Gupta**, SK Hafizul Islam, Mohammad S. Obaidat, Arijit Karati, and Balqies Sadoun, “LAAC: Lightweight Lattice-based Authentication and Access Control Protocol for E-Health systems in IoT Environments”, IEEE Systems Journal, Vol. 15, No. 3, pp. 3620–3627, 2021
  - **Daya Sagar Gupta**, SK Hafizul Islam, Mohammad S. Obaidat, Pandi Vijayakumar, Neeraj Kumar, and YoHan Park. “A Provably Secure and Lightweight Identity-based Two-party Authenticated Key Agreement Protocol for IIoT Environments”, IEEE Systems Journal, Vol. 15, No. 2, pp. 1732–1741, 2020

### Education

2018 PhD, Information Security, IIT (ISM) Dhanbad

2014 M. Tech, CSE, IIT (ISM) Dhanbad [Distinction]

2011 B. Tech, CSE, AKTU Lucknow

### Research Projects

"Design of Security Protocols for IoT enabled application areas", RGIPT Amethi, 2021-23,

