

# CURRICULUM VITAE

## **Dr. Somen Debnath**

Associate Professor  
Department of Computer Science & Engineering,  
Tripura University,  
Suryamaninagar, Agartala, Pin-799022, Tripura,  
E-mail- [somendebnath@tripurauniv.ac.in](mailto:somendebnath@tripurauniv.ac.in)



**Date of Joining:** 7<sup>th</sup> Dec 2023(Tripura University)

### **Educational Qualifications:**

- **Doctor of Philosophy: PhD** in Information Technology at **North Eastern Hill University** (A Central University). Thesis: “Design and Analysis of Secure Data Access Control Mechanism for Outsourced Cloud Data”.
- **Post-Graduation: M.Tech.** (Computer Science & Engineering), **1<sup>st</sup> Class, Tripura University** (A Central University).
- **Graduation: B.E.** (Computer Science & Engineering), **1<sup>st</sup> Class, National Institute of Technology, Agartala (NIT Agt).**
- **H.S.(+2):** Science, I Division, **Sabroom Higher Secondary School (T.B.S.E.).**
- **Madhyamik:** General, I Division, **Harina Higher Secondary School (T.B.S.E.)**

### **Research Interest:**

- Information Security
- Access Control
- Cloud Computing
- Blockchain
- Internet of Things

### **Working Experiences:**

- Associate Professor, Dept. of CSE, Tripura University (A Central University), 7<sup>th</sup> Dec 2023 to till date.
- Assistant Professor (Level-12/AGP-8000), Dept. of IT, Mizoram University (A Central University), 1<sup>st</sup> August 2022- 6<sup>th</sup> Dec 2023.
- Assistant Professor (Level-11/AGP-7000), Dept. of IT, Mizoram University (A Central

University), 1<sup>st</sup> August 2017- 31<sup>st</sup> July 2022.

- Assistant Professor (Level-10/AGP 6000), Dept. of IT, Mizoram University (A Central University), 1<sup>st</sup> August 2012- 31<sup>st</sup> July 2017.
- Assistant Professor (AGP 6000), Dept. of CSE, NIT Manipur, 3<sup>rd</sup> August, 2011-31<sup>st</sup> July, 2012.

### **Administrative Experiences:**

- Nodal Officer, Samarth, Tripura University, Nov, 2024 to till date
- Nodal Officer, AeBAS, Tripura University, Official Order Dated 06-08-2024
- OSD, Examination Department, Tripura University, Official Order Dated 19 Nov, 2024
- SPOC, NPTEL Local Chapter, Mizoram University, Aug 2018 to 6<sup>th</sup> Dec 2023.
- HoD (i/c), Dept. of Information Technology, Mizoram University, 22, Sept 2017 to 21 Feb, 2021
- Member Secretary, MZUEEE (Engg. Entrance Examination) (All B. Tech. (Regular/ Lateral Entry) Programmes Admission of Mizoram University), 2018.
- Hostel Warden, Hmuifang Hall of Residence, Mizoram University, Mar 2013-April, 2018
- Hostel Warden, Boys Hostel-1, NIT Manipur, Sept, 2011-July, 2012

### **Research Projects:**

1. **Name of the Project:** Development of a Platform for Tripura's Handicraft Empowerment using Ensemble Technologies  
Funding Agency: DST, Govt of India, (TSP Scheme of IBITF).  
Role : PI  
Amount of Grant: Rs.81,00,000/-  
Duration: March 2024- March 2026 (**Status: Ongoing**).
2. **Name of the Project:** Scaling the Sustainable Smart Parking Solution for Urban Mobility in Aizawl and Beyond.  
Funding Agency: DST, Govt of India, (DIAL Scheme of IBITF).  
Role : Co-PI  
Amount of Grant: Rs.77,95,720/-  
Duration: March 2025- March 2027(**Status: Ongoing**).
3. **Name of the Project:** Supply Chain Management for Agricultural Products of Mizo Farmers using Blockchain and Machine Learning  
Funding Agency: DST, Govt of India, (TSP Scheme of IBITF).  
Role : Co-PI  
Amount of Grant: Rs.32,00,000/-

Duration: Nov 2023- Nov 2025(**Status: Ongoing**).

4. **Name of the Project:** Smart Task Management for the unorganised workers in Mizoram  
Funding Agency: DST, Govt of India. (TSP Scheme of IBITF).  
Role : Co-PI  
Amount of Grant: Rs.30,00,000/-  
Duration: Nov 2023- June 2025(**Status: Completed**).
5. **Name of the Project:** Sustainable Smart Parking Solution for Aizawl City  
Funding Agency: DST, Govt of India, (TSP Scheme of IBITF).  
Role : Co-PI  
Amount of Grant: Rs.31,65,500/-  
Duration: Nov 2023- April 2025(**Status: Completed**).

### **Patents:**

- A Signcryption-Based Outsourced Data Access Control, Garman Patent, IPC G06F 21/62, Awarded on 02-04-2024
- A Cascade Network System for Classification of Rice Grain, Patent No.: 2023/02261, South African Patent, Awarded on 2023-05-31

### **Professional Bodies Membership:**

- Institute of Engineers (IEI)(M-1702348)
- Indian Society for Technical Education (ISTE) (109049)
- Computer Society of India (CSI) (F8004119)
- International Association of Engineers (IAENG) (164039)

### **Academic Membership:**

- Member of the IQAC Committee, Tripura University, Notification Dated 04.02. 2025
- Member of BUGS, CSE Dept, Tripura University, Notification Dated 06-08-2024.
- Member of the Committee to prepare the proposal to initiate an academic programme in Rubber Technology and Bamboo Cultivation & Resource Utilization, Tripura University, Notification dated 19-07-2024.
- Annual Report Preparation Committee, Tripura University, Academic Year 2023-2024 and 2024-2025
- Member of the Board of Post Graduate Studies of the Faculty of Science, Tripura University, Notification dated 19.02.2024.
- Member Official Language Implementation Committee, Mizoram University, Apr 2023 to Apr 2025.

- Member, School Board, School of Engineering & Technology, MZU, from Nov, 2021 to Nov 2024
- Member, Board of Studies, Dept. of Library and Information Science, MZU, from Aug, 2022 to Aug, 2025
- Member, Board of Studies, Dept. of Computer Engineering, MZU, from Sept, 2021 to Sept, 2024
- Member, Board of Studies, Dept. of IT, MZU, from Oct, 2020 to Oct, 2023
- Chairman, Board of Studies, Dept. of IT, MZU, from Sept, 2017 to Feb, 2021
- Member, Doctoral Research Committee, Computer Engineering Department, MZU Sept 2020 to Sept 2023.
- Member, Doctoral Research Committee, Information Technology Department, MZU Sept 2023 to Sept 2025.
- Member, Board of Studies, Dept. of ECE, MZU from April, 2018 to April, 2021
- Member, Board of Studies, Dept. of Hindi, MZU from Sept, 2013 to Sept, 2016
- Member, Board of Studies, Dept. of BCA, MZU from Mar, 2014 to Mar, 2017
- Member, School Board, School of Engineering & Technology, MZU, from Sept, 2017 to Feb, 2021
- Member, Academic Council, Mizoram University, Sept, 2017 to Feb, 2021
- Member, Departmental Purchase Committee Dept. of Electrical Engineering (2018-2021)
- Chairman, Departmental Purchase Committee Dept. of IT (Sept 2017-Feb, 2021)

### **Workshop/FDP/Webinar Organized**

- Coordinator, Three Days Workshop and Sensitization Programme for Students to Make Them Aware of Handicrafts of Tripura at Tripura University on 3rd to 5th March 2025
- Coordinator, Training Cum Awareness Program on Digital Platform for Handicraft Artisans at Bokafa, Bir Chandra Manu on 28 February 2025
- Coordinator, Training Cum Awareness Program on Digital Platform for Handicraft Artisans at Shankhala School Ground Hezamara, Simna on 25 February 2025
- Coordinator, Training Cum Awareness Program on Digital Platform for Handicraft Artisans at Paharpur, Amarpur, South Tripura on 21 February 2025
- Coordinator, Three-day Training cum Workshop on Tripura's Artisan's Handicraft

Empowerment Using Ensemble Technologies from 11th to 13th November 2024

- Coordinator, One Day Training Cum Workshop on Blockchain & Machine Learning Based Digital Marketing Platform on 16 July 2024
- Organizing Committee, 3 Days National Workshop on Recent Advances in Science and Technology, Mizoram University, 13 Apr, 2023 to 15 Apr 2023
- Coordinator, 13 Days ATAL CPDP programme on Cyber Security and Digital Forensic 11<sup>th</sup> Sept 2022 to 23<sup>rd</sup> Sept 2022.
- Coordinator, 5 Days ATAL FDP on Security and Privacy 09/08/2021 to 13/08/2021.
- Organizing Secretary, One Day National Webinar on Contemporary Computing Paradigm, 06/11/2020 collaboration with Computer Society of India, Kolkata Chapter.
- Coordinator, 5 Days on Training on Agile 3<sup>rd</sup> August- 9<sup>th</sup> Sept 2020 Methodology
- Coordinator, One Week Faculty Development Programme (FDP) on “Latex” from 29 June- 3<sup>rd</sup> July 2020 collaboration with IIT Bombay
- Organizing Secretary, National Webinar on Software Development: Agile vs Waterfall 13 July 2020 at Mizoram University
- Organizing Secretary, National Webinar on Cloud Computing and Artificial Intelligence 28<sup>th</sup> May, 2020 at Mizoram University
- Coordinator, Workshop on NPTEL Courses on 7<sup>th</sup> Feb 2019 at Mizoram University
- Organizing Committee, Two Days workshop on IoT using Adriano 25/10/2018 to- 26/10-2018 at Mizoram University
- Organizing Committee, Two Days workshop on Android Application Development 21/03/2013- 22/03/2013 at Mizoram University

### **Expert/Invited Talks:**

- Session Chair in All India Seminar on “Artificial Intelligence, Design Thinking and Innovation” to be held on January 16 - 17, 2026.
- Session Chair in International Conference AMRIT-2024 for the Technical Session on Network Application and Security, at National Institute of Technology, Agartala 22-24 December 2025
- Delivered an Invited Lecture in a Short-Term Course on Information & Communication Technology on “Secured Access Control in Cloud Storage” UGC, MMTTC, Mizoram University January, 2025.
- Resource Person on Interdisciplinary Refresher Course in Computational Mathematics and Applications on “MOOC Courses in Higher Education” UGC, MMTTC, Assam

University (A Central University) August 2024

- Session Chair in International Conference AMRIT-2024 for the Technical Session on Network Application and Security, at National Institute of Technology, Agartala 8-9 November, 2024
- Session Chair in the International Conference IEEE SILCON-2024 for the Track of Artificial Intelligence, Data Science and Computing at National Institute of Technology, Agartala 15-17 November, 2024
- Session Chair at Three days International Conference on Advanced Innovative Research in Engineering conducted by the School of Engineering and Technology, Mizoram University from 13.03.2024 to 15.03.2024
- Invited lecture on Application Security at Techno College of Engineering Agartala , 23/02/2024
- Invited lecture on Indian Knowledge System in NEP, at Teliamura Govt. Degree College, Teliamura dated 09/01/2024
- Invited lecture on Challenges and Opportunities of AI Tools in Higher Education, at Ramthakur College, Agartala dated 28/12/2023
- Invited lecture on Introduction to MOOCs at Mizoram College Of Nursing, Aizawl dated 10/11/2023
- Invited Lecture on Challenge and Opportunity of ICT in Teaching and learning, UGC, HRDC Programme, Mizoram University, Aizawl, 05-11 September, 2023
- Invited Lecture on Big data Management in Sports in 2 days National Seminar on Sports Engineering, Mizoram University, Aizawl, 19<sup>th</sup> – 20<sup>th</sup> May 2023
- Invited Lecture on Cyber Security: Crime Instances and Corresponding Technological views in 3 Days National Workshop on Recent Advances in Science and Technology, Mizoram University, Aizawl, 11<sup>th</sup> – 13<sup>th</sup> Apr 2023
- Invited Lecture on Challenges and Opportunity of ICT in Teaching-Learning in Faculty Development Program on ICT in Teaching Learning Process, Government Degree College, Teliamura, Tripura, 11<sup>th</sup>–18<sup>th</sup> April, 2023
- Session Chair International Conference on Advanced Computing, Machine Learning, Robotics and Internet Technologies(AMRIT-2023), Assam University, Silchar 10-11 March, 2023
- Invited Lecture on Cyber Security: Awareness Perspective Awareness Programme on Cyber Security and Emerging Technologies under NECB 2.0 Project NIELIT, Aizawl, 12 Oct 2022
- Invited Lecture on Public Key Cryptosystem and Message Authentication: An Overview Two weeks Hybrid mode CPDP under ATAL on “Cyber Security and Digital Forensic”

12th - 23rd Sept 2022 Mizoram University, Aizawl, 21st Sept 2022

- Invited Lecture in BDT Star College scheme funded two days“ workshop on C++ and Python Programming at Mizoram, 4<sup>th</sup> -5<sup>th</sup> April, 2022.
- Invited Lecture in two days IEEE workshop on Researches on Embedded System and Security at National Institute of Technology Silchar, 13<sup>th</sup> -14<sup>th</sup> December, 2021.
- Invited Lecture in Faculty Development Programme under ATAL on “Security and Privacy: Recent development on Cloud Data Security” Mizoram University, 9<sup>th</sup>-13<sup>th</sup> August, 2020.
- Invited Lecture in National e-Workshop on “Linux Fundamental” at Women’s College, Agartala, 3<sup>rd</sup>- 5<sup>th</sup> December, 2020.
- Invited Lecture in Faculty Development Programme under ATAL on “IoT Technology: Software and Hardware-based Hands-on” at National Institute of Technology Mizoram, 16<sup>th</sup> & 17<sup>th</sup> October, 2019.
- Invited Lecture on “Cloud Computing” in Faculty Development Programme under ATAL at Mizoram University, Mizoram, Sept, 2019.
- Invited Lecture in Workshop on “LaTeX- Writing Thesis and Article” at Assam University, Silchar, 28<sup>th</sup> August, 2019.
- Invited Talk in State Level one week Workshop on “Open Source Programming Technique” at Mizoram University, 14<sup>th</sup>-20<sup>th</sup> March, 2016.
- Invited Lecture on “Security issues in Cloud Computing” at Maritain Luther Christian University, Shillong, 25th Feb, 2015.

## **PhD Scholars**

### **Awarded:**

1. **Paromita Goswami**, Registration Number: MZU/PhD/1655 of 06/11/2020. Thesis Title: Design and Analysis of Efficient Protocols for data Security in Cloud Computing. (Awarded 6<sup>th</sup> May 2024)
2. **Arijita Bhowmik**, Registration Number: MZU/PhD/1968 of 01/09/2021. Thesis Title: Design of an Efficient and Secure Task Matching Technique in Crowdsourcing Platform. (Awarded 15<sup>th</sup> Nov 2025)

### **Ongoing:**

1. **Michael Rosangliana**, Registration Number: MZU/PhD/2214 of 19/08/2022, Synopsis Title: Design and Analysis of Secured Financial Records in Cloud Storage.
2. **Sanjukta Pal**, Registration no. MZU/Ph.D./2437 of 19.08.2022 Synopsis Title: IoT-Based Secured Long-Range Connectivity and Navigation of Connected Devices.

3. **Avik Mitra**, Registration Number: MZU/PhD/1969 of 28/08/2021. Synopsis Title: Investigation of Explainable Deep Learning Techniques and their Deployment in Network Intrusion Detection Systems.

### **JOURNALS:**

- Michael Rosangliana, Somen Debnath, Morrel V.L. Nunsanga, "Secure and Efficient Cloud Framework for Financial Data Sharing Using Attribute-Based Signcryption Technique", Cluster Computing Journal.
- Sanjukta Pal, Somen Debnath, R Chawngsangpuii, "Priority-Driven Mobility-Aware Dynamic LoRaWAN Model for Enhanced IoT Connectivity and Energy Efficiency", Wireless Personal Communications.
- A. Bhowmik, S. Debnath, P. Majumdar, and R. Chawngsangpuii. 2025. An Efficient Task Matching Schema with Signature-Oriented Encryption Technique. Utilitas Mathematica. URL: <https://utilitasmathematica.com/index.php/Index/article/view/2528>
- Goswami, Paromita, Neetu Faujdar, Somen Debnath, Ajoy Kumar Khan, and Ghanshyam Singh. "Investigation on storage level data integrity strategies in cloud computing: classification, security obstructions, challenges and vulnerability." *Journal of Cloud Computing* 13, no. 1 (2024): 45.
- A. Bhowmik, S. Debnath, R. Chawngsangpuii, and P. Majumdar. 2024. A Ring Signature Based Task Matching Schema for Crowdsourcing Environments. Journal of Technology, 12(12), 865–875. DOI: 18.15001/JOT.2024/V12I12.24.1133
- Goswami, Paromita, Neetu Faujdar, Ghanshyam Singh, Kanta Prasad Sharma, Ajoy Kumar Khan, and Somen Debnath. "Stub signature-based efficient public data auditing system using dynamic procedures in cloud computing." *IEEE Access* 12 (2024): 58502-58518.
- Juniorika Lyngdoh; Somen Debnath; Hemanta Kumar Kalita, An Efficient Approach to Identify a Malicious Nodes in a Self-Organized Network Based on Human Immune System, *Science and Technology Journal*, ISSN 2321-3388 volume 11. No.2, pp 117-125, September 2023.
- Paromita Goswami, Neetu Faujdar, Somen Debnath, Ajay Kumar Khan, ZSS Signature-based Audit Message Verification Process for Cloud Data Integrity, *IEEE Access*, ISSN:2169-3536, pp.1-16 (2023).
- Pachuau, J.L., Kashyap, P., Kumar, A., Debnath, S. Segmentation of composite signal into harmonic Fourier expansion using genetic algorithm. *International Journal of Information Technology*. pp.1-6, (2022).
- Sahana, Subhas Chandra, Sangeeta Mashahary, Bubu Bhuyan, and Somen Debnath. "A key-escrow free identity-based signature scheme without requirement of a secure channel in the private key issuance phase." *International Journal of Intelligent Enterprise* 8, no. 2-3 (2021): 296-305.
- Debnath, Somen, Bubu Bhuyan, and Anish Kumar Saha. "Privacy preserved secured



outsourced cloud data access control scheme with efficient multi-authority attribute based signcryption." *Multiagent and Grid Systems* 16, no. 4 (2020): 409-432.

- Debnath, Somen, and Bubu Bhuyan. "Large universe attribute based encryption enabled secured data access control for cloud storage with computation outsourcing." *Multiagent and Grid Systems* 15, no. 2 (2019): 99-119.
- Maity, S., V. Kartik, P. P. Sahu, P. K. Swain, C. T. Bhunia, and S. Debnath. "Unavoidable front contact model of Si solar cell through a generalized effective medium approximation approach." *Sādhanā* 43, no. 3 (2018): 31.
- Debnath, Somen, and Bubu Bhuyan. "Efficient and scalable outsourced data access control with user revocation in cloud: a comprehensive study." *Multiagent and Grid Systems* 14, no. 4 (2018): 383-401.
- Morrel V.L.Nunsanga, Somen Debnath, R.Lalchhanhima, "A Boolean based method for evaluating relationships of noise tolerant item sets in binary transactions" in *International Journal of Advanced Research in Computer Engineering*, ISSN:2278– 1323,Volume-7, Issue-3, pp-298-302, March-2018
- Somen Debnath and Amarnath Pathak. "A Study on Mining Fuzzy Classification Rules with Exceptions", *Indian Journal of Computer Science and Engineering*, ISSN: 0976-5166 Vol. 8 No. 2 pp. 84-87, Apr 2017
- Subas Chandra Sahana, Somen Debnath, Bubu Bhuyan, "A new Short Signature Scheme from Weil Pairing" *International Journal for Computer Applications* ISSN 0975 – 8887 Volume 126 – No.14, pp. 4-8, September 2015.
- Somen Debnath, Subas Chandra Sahana, Bubu Bhuyan, "A Distributed Fine-grained Access Control Mechanism for Cloud Data Outsourcing" *Science & Technology Journal*, ISSN 2321-3388 volume 3. No.2, pp 78-85, September 2015.
- Khelchandra, Thongam, Jie Huang, and Somen Debnath. "Path planning of mobile robot with neuro-genetic-fuzzy technique in static environment." *International Journal of Hybrid Intelligent Systems*, vol 11, no. 2 (2014): 71-80.

## **BOOK CHAPTERS/ CONFERENCES:**

- A. Bhowmik, S. Debnath, P. Majumdar, and R. Chawngsangpuii, "A blockchain Based Resusable Blood Bank Management Framework Using Searchable Encryption for Efficient Doner", *Intelligent Computing in Cyber Security: A machine learning Approach* by Scrivener Publisher
- M. Rosangliana, S. Debnath, M. V.L. Nunsanga, "A Lightweight and Provably Secure Three-Factor Mutual Authentication Protocol for Cloud-Based Financial Transaction. 3rd International Conference on Advanced Computing, Machine Learning, Robotics and Internet Technologies 22 -24 Dec 2025 at Assam University.
- S. Pal, S. Debnath, R. Chawngsangpuii, "Energy Aware Adaptive Routing Using

Quantum Probabilistic Learning in LoRaWAN IoT Environments. 3RD International Conference on Advanced Computing, Machine Learning, Robotics and Internet Technologies, 22 -24 Dec 2025at Assam University.

- N. K. Reang, T. Debbarma, S Debnath, A Majumder, J Pal, S. Majumder, “Emerging Technology Aided Tripura Handicraft: Impact on Artisan's Socio-Economic Status”, MICA 2025, ICFAI University
- Bhowmik, A., Goswami, P., Gogoi, M., Debnath, S. Khan, A.K. “An Effective Signature-Oriented Model for Task Matching in Crowd Platform” International 2nd International Conference on Advanced Computing, Machine Learning, Robotics, and Internet Technologies (2024) 1-13
- Sarkar, M. R., Chakraborty, S., Majumder, A., Debnath, S., Pal, J., & Majumder, S. (2024, October). Design and Development of an Energy-Efficient Heart Rate Monitoring System Using IoT Platform. In *International Conference on Information Technology and Intelligence* (pp. 217-227). Singapore: Springer Nature Singapore.
- Pal, Sanjukta, R. Chawngsangpuii, and Somen Debnath. "Compatibility Checking to Adopt MANET in LoRaWAN for Long-Range Connectivity." In *International Conference on Cognitive Computing and Cyber Physical Systems*, pp. 3-12. Singapore: Springer Nature Singapore, 2023.
- Bhowmik, A., Debnath, S., Paul, A., Majumder, S., Deb, D. and Cowlessur, S.K., 2023, October. Online blood bank system using blockchain in crowdsourcing platform. In *International Conference on Advanced Communications and Machine Intelligence* (pp. 513-521). Singapore: Springer Nature Singapore.
- Goswami, Paromita, Vardan Sharma, Somen Debnath, and Ajoy Kumar Khan. "Acknowledgement Verification of Stored Data in Shared Cloud Resource Pool." In *2023 6th International Conference on Information Systems and Computer Networks (ISCON)*, pp. 1-6. IEEE, 2023.
- Rosangliana, Michael, Somen Debnath, R. Chawngsangpuii, and Juniorika Lyngdoh. "An Efficient Method for Secure Storing of Financial Records in Cloud Storage." In *International Conference on Data, Electronics and Computing*, pp. 375-386. Singapore: Springer Nature Singapore, 2023.
- Goswami, Paromita, Munmi Gogoi, Somen Debnath, and Ajoy Kumar Khan. "Signature-Based Batch Auditing Verification in Cloud Resource Pool." In *International Conference on Advanced Computing, Machine Learning, Robotics and Internet Technologies*, pp. 181-193. Cham: Springer Nature Switzerland, 2023.
- Juniorika Lyngdoh, Somen Debnath Impact of IoT Technology and its Applications in Sports in National Seminar on Sports Engineering, 1-5 2023, (Presented).
- Baidya, A., Saha, R., Gaini, A., Koley, C., Debnath, S. and Datta, S., 2022. Effect of Au-Al Dual-Metal Gate on 3D Double-Gate Junctionless Transistor Performance. In *Smart and Intelligent Systems* (pp. 421-429). Springer, Singapore.

- Thihlum, Z., Khenglawt, V. and Debnath, S., 2020, November. Machine Translation of English Language to Mizo Language. In 2020 IEEE International Conference on Cloud Computing in Emerging Markets (CCEM) (pp. 92-97). IEEE.
- Lalrinmawii, C. and Debnath, S., 2020, July. Analysis of Post centric suicidal expressions and classification on the Social Media Post: Twitter. In 2020 11th International Conference on Computing, Communication and Networking Technologies (ICCCNT) (pp. 1-5). IEEE.
- Das, P. and Debnath, S., 2020, July. A trust computing model for future generation networks. In 2020 11th International Conference on Computing, Communication and Networking Technologies (ICCCNT) (pp. 1-4). IEEE.
- Debnath S, Bhuyan B. An Efficient Computation and Storage Outsourcing Process with Verification for Light-Weight Devices. In International Conference on Innovation in Modern Science and Technology 2019 Sep 20 (pp. 94-103). Springer, Cham.
- Debnath, S., Nunsanga, M.V. and Bhuyan, B., 2019. Study and scope of signcryption for cloud data access control. In Advances in Computer, Communication and Control (pp. 113-126). Springer, Singapore.
- Pathak, A., Goel, D. and Debnath, S., 2018. Mining Fuzzy Classification Rules with Exceptions: A Comparative Study. In Proceedings of the International Conference on Computing and Communication Systems (pp. 147-153). Springer, Singapore.
- Somen Debnath, Bubu Bhuyan “An Expressive Access Control Mechanism with user Revocation for Cloud Data Outsourcing”, *Proceedings of International Conference on Electrical Electronics, Computer, Mechanical and Computing*, ISBN 978-1-5386-4304-4, pp. 250-256, IEEE Xplore, 28<sup>th</sup> -29<sup>th</sup> Jan, 2018
- Somen Debnath, Sangita Neog, Subas C. Sahana, Bubu Bhuyan, “ Study on Secrecy and Privacy Preserving Approaches over Cloud Data Outsourcing” , *Proceedings of International Conference on Computing and Communication System(I3CS'15)*, Volume II, 9<sup>th</sup> - 10<sup>th</sup> April 2015, at NEHU, ISBN 978-1-4799-5857-01, pp 135-142,
- Thongam Khelchandra, Jie Huang, Somen Debnath, “Path Planning of Mobile Robot with Neuro-Fuzzy Technique” *Proceedings of “12th International Conference on Intelligent Systems Design and Applications*, ISBN: 978-1-4673-5118-8, Kochi, India. IEEE Explore 27<sup>th</sup> – 29<sup>th</sup> November 2012.
- Somen Debnath, Biswajit Saha, “A Promising Direction of Cryptography using DNA Computation” *Proceedings of National Conference on Information and Communication Opportunities & Challenges in 21<sup>st</sup> Century(NCICT)"* BIT Mesra, India , 4<sup>th</sup> April, 2011

### **Outreach Activities:**

- Institute Representative: NPTEL Exam, POD IITM, Aizawl Center from Dec 2018 to Dec 2023
- Observer: UGC NET, NEET, CRPF, IB, Indian Army, IBPS, SSC etc. Examination

- Session Chair: International Conference SIS 2021, AMRIT 2023, NSSE 2023.
- Question Paper Setter: Mizoram Public Service Commission, Mizoram Civil Service, Mizoram Profession Courses: MCA, BCA
- External Examiner: Practical Examiner NEILIT, Aizawl
- Micro Observer: Mizoram Assembly Election
- Reviewer for Conference papers: Conferences ICESIC2022, ICoCIST-2021, COMSYS-2021, SCES 2020, I3CS-2020, ICCISIoT 2019, ISMS2019, ETES 2018 etc.

### **Research Papers Reviewed for Journals/Books:**

- International Journal of Machine Learning and Cybernetics
- Peer-to-Peer Networking and Applications
- Energy Informatics
- Scientific Reports
- Wireless Networks
- Cluster Computing
- International Journal of Information Security
- IEEE Access- The Multidisciplinary Open Access Journal
- Journal of The Institution of Engineers (India): Series B
- Journal of Network and Computer Applications
- Recent Patents on Computer Science
- Science and Technology Journal
- SN Computer Science
- International Journal of Distributed Sensor Networks
- McGraw-Hill Education(Book: Cryptography- Atul Kahate)

### **Professional Trainings/Workshop/Short Term Course Participated:**

- Successfully Completed one-day cascading training workshop on Rashtriya Karmayogi Large Scale Jan Seva Program at Tripura University on 8<sup>th</sup> September 2025.
- Successfully completed the Faculty Induction Programme 2024 to be conducted by MMTTC Tripura University during November 26 to December 23, 2024
- Participated 5 days FDP on Cyber-Attacks and Defence conducted by C-DAC, NOIDA (Online) 5days 2nd Jan, 2024 to 6th Jan 2024
- Refresher Course on Engineering and Technology, at Mizoram University 2weeks (Online) 1st -14th Dec, 2020
- Short Term Training Programme(STTP) on Fundamentals of Network Security 1 week

- (Online) 27- 31/07/2020, NITTTR-Kolkata
- Short Term Training Programme(STTP) on „Big Data Analytics“ Mizoram University, 1 week (Online) 06- 10/07/2020, NITTTR, Kolkata
  - Short Term Training Programme(STTP) on „Technology Enable Learning” Mizoram University, 1 week (Online) 24-28/08/2020 NITTTR, Kolkata
  - ATAL Academy FDP on "Internet of Things (IoT)" Mizoram University, 1 week (Online) 2nd - 6th Feb 2021 AICTE
  - ATAL Academy FDP on Sensors Technology. Mizoram University 1, week (Online) 15th -19th Feb., 2021 AICTE
  - ATAL Academy FDP on Security and Privacy , Mizoram University, 1 week (Online) 09 - 13/08/2021, AICTE
  - ATAL Academy FDP on Energy Engineering, Mizoram University, 1 week (Online) 23- 27/08/2021, AICTE
  - International FDP on Data Analytics and Machine Learning Mizoram University 1 week (Online) 21 - 25 March 2022 MZU& NEHU
  - Participated in one week “Online Faculty Development Program on **PHP-MySQL**” from 17<sup>th</sup> June to 22nd June, 2020 organized by Department of Basic Science and Humanities (First Year), J D College of Engineering & Management, Nagpur, in association with Spoken Tutorial, IIT Bombay.
  - Successfully completed the Short Term Training Programme through ICT Mode on **Fundamentals of Network Security** organised by NITTTR-Kolkata from 27/07/2020 to 31/07/2020
  - Actively participated and completed One Week online Faculty Development Program on **“PYTHON 3.4.3”** from 8th June to 13th June 2020 organized by PRAGATI ENGINEERING COLLEGE.
  - Successfully completed the Short Term Training Programme through ICT Mode on **“Big Data Analytics”** organised by NITTTR-Kolkata from 06/07/2020 to 10/07/2020.
  - Participated Webinar on **Data-driven Predictive Analytics**, 5th-6th August, 2020 organised by Department of Computer Science, Assam University, Silchar.
  - Participated & completed successfully 5 days AICTE Training And Learning (ATAL) Academy FDP on **"Internet of Things(IoT)"** from 27-09-2019 at Mizoram University
  - Participated 5 days Academic **Leadership Development Programme** during 11<sup>th</sup>-15<sup>th</sup> March 2019. At Mizoram University.
  - Participated 2 days National workshop on **“Recent Trends in power & Energy (RTE2018)”** from 8<sup>th</sup> October 2018- 12<sup>th</sup> October 2018.
  - Participated 5 days National level workshop cum championship on **“IoT using Adriano”** from 25<sup>th</sup> October 2018- 26<sup>th</sup> October 2018.
  - Participated 3 days Awareness training programme on **“Environment Hazard of Electronics Waste and its Managements (Phase-II)”** organized by NELIT 30.07.2018 to 01.08.2018.
  - 5 days National Workshop on **“Surveying by Total Station”** At Mizoram University, 7th-11th May, 2018

- 3 days national conference on “Strategies for development of higher education in northeast India” at Mizoram University 9th -11th April, 2018
- North-East ISI Kolkata-MZU Winter School on “**Algorithms with Special Focus on Graphs**” at Mizoram University, 6th -11<sup>th</sup> March, 2017.
- Short Term Training Programme on “**Cyber Security**” by NITTTR-Kolkata at Guwahati, 31st Oct -04th Nov, 2016.
- Special Summer School equivalent to **Refresher Course** by UGC- HRDC, at Mizoram University, 7th-27th June, 2016.
- North East Workshop on “**Cryptology**” conducted by Applied Statistics Unit of the ISI-Kolkata, 21st -27th January, 2016.
- Workshop on “**Statistical Data Analysis Methods**” organized by ISRU unit of ISI Kolkata at Tripura University, 18th-24th Nov, 2015.
- Two days” workshop on Digsilent power Factory, at Mizoram University, organized by TVASTAR Engineering Solutions Pvt. Ltd. Haryana, 01st- 02nd July, 2015.
- Deity Sponsored National Workshop on “**Trends in Wireless Networking Protocols and Practice-2015**”, at NEHU 29th -30th Jan, 2015.
- TEQIP-II Project Sponsored Faculty development Programme on “**Advanced Software Engineering**”, organized by TIT, Tripura from 26th -30th Sep, 2014.
- Workshop on “Labview and Multisim” organized by Micro-Pro and National Instrument in Mizoram University, 28th- 29th Apr, 2014
- National Seminar on “Marginal Sections of the Society and Human Right: A Discussion” at Mizoram University, 28<sup>th</sup> Feb-1<sup>st</sup> Mar, 2014.
- 12th UGC–sponsored **Orientation Course** organized by Academic Staff College, Mizoram University 19th Nov-16th Dec, 2013.
- 14th workshop on “**Computational Informational Processing**” organized by ISI Kolkata at TIT Agartala, Tripura, 21st -23rd Jan, 2013.
- “National Workshop cum Training Programme on **Research Methodology and application** of SPSS in Business Studies” organized by ICSSR, New Delhi at Mizoram University from 28th Feb- 9th Mar, 2013.
- Workshop on “Microsoft India AppFest 2013” organized by MicroSoft Pvt. Ltd. At Mizoram University, 26th Feb, 2013.
- Workshop on “**Research Methodology**” organized by IIT Bombay at NIT Agartala, 24th Jul- 4th Aug, 2012.
- Workshop & Mini Colloquia on “Future of NANO Electronics” by IEEE EDS Kolkata Section and Madras Section, NIT Manipur 30th Apr, 2012.
- Workshop on “**Public Key Infrastructure (PKI)**” by CDAC Bangalore at NIT Agartala, 7th -8th Apr, 2011.
- “Capacity Building Programme on Child Labour for Social Partners from North- Eastern States” by V. V. Giri National Labor Institute, Noida, 31st Jan -04th Feb, 2011.
- Seminar on “Rough sets, Fuzzy Sets and their Application” by Fuzzy Sets and Rough Sets Association, Tripura University, 7th Apr, 2010.

- “Short Term Practical Training Course” under SDC (Computer) & Sr. AO (Computer) in BSNL, Agartala, 26th May-21st June, 2008.

**Personal Details:**

Sex:	Male
Father’s Name:	Shri Sunil Ch. Debnath
Mother’s Name	Smt Saraswati Debnath
Nationality:	Indian
Permanent Address:	Vill-Guachand, P.O; Harina, Sabroom, South Tripura, 799143

### **Brief Bio:**

Dr. Somen Debnath is an Associate Professor in the Department of Computer Science and Engineering at Tripura University (A Central University under MHRD), where he has been serving since December 2023. He obtained his B.E. and M.Tech. degrees in Computer Science and Engineering from NIT Agartala and Tripura University, respectively, and was awarded his Ph.D. degree from North Eastern Hill University (NEHU), Shillong, in the area of Cloud Data Security.

Dr. Debnath has over 15 years of teaching experience in Computer Science and Engineering, having served at premier institutions including NIT Manipur, Mizoram University (A Central University), and Tripura University (A Central University). His research interests span Cloud Data Outsourcing, Access Control, Cryptography and Information Security, Blockchain, and the Internet of Things (IoT).

He has published more than 40 research articles in reputed journals, conference proceedings, and book chapters indexed in SCI, Scopus, and UGC-listed platforms. He has also filed and been granted two patents. Dr. Debnath has served as PI/Co-PI for two DST-funded research projects and is currently working as PI/Co-PI on three ongoing research projects funded by DST.

In academics and research supervision, he has successfully guided two Ph.D. scholars, supervised several M.Tech. students, and is currently guiding three Ph.D. scholars in the domain of Security and Privacy. He has actively contributed to academic capacity building by organizing several Faculty Development Programs (FDPs), seminars, and workshops at the national and state levels. Additionally, he has delivered more than 30 invited lectures in national workshops, FDPs, and seminars.

Dr. Debnath is a member of the Institution of Engineers (India) and a life member of the Computer Society of India (CSI) and the Indian Society for Technical Education (ISTE).