RAKTIM DEB
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Brief:

Dr. Raktim Deb, Master in Application from North Assam Engineering College in 2008, JRF from Assam University in 2010, M.Tech in Information Technology from Gauhati University in 2012, awarded PhD in Computer Science and Engineering from Assam University in 2022. Presently working as Assistant Professor (Selection Grade) in the Department of Information Technology at Tripura University, India from June, 2025. 12 years of teaching and research experience in Software Defined Network and Sensor, Cloud Computing, and Blockchain Technology. Supervised more than 20 master thesis dissertations. Published several papers in International Journals and Conference, has 3 patents. Organized 1 International Conferences and 1 workshop. Reviewer of more than 4 Journals and 3 conferences. Professional Member of IEEE.

Work Experience Details

Organization	: Tripura University
Designation	: Assistant Professor
Period	: 16th June 2025 to Till date
Location	: Agartala, Tripura

Organization	: ICFAI University
Designation	: Assistant Professor
Period	: 1st August 2023 to 13th June 2025
Location	: Agartala, Tripura

Organization	: Assam University
Designation	: Guest Faculty
Period	: 31st July 2015 to 31st May 2021
Location	: Silchar, Assam

Organization	: North Eastern Regional Institute of Management (NERIM)
Designation	: Assistant Professor
Period	: 1st August 2012 to 28th July 2015
Location	: Guwahati, Assam

Organization	: Assam University
Designation	: Junior Research Fellow (JRF)
Period	: 14 February 2009 to 17 August 2010
Location	: Silchar, Assam

Areas of Interest

- Automata Theory
- Compiler Design
- Software Defined Networking

- Cloud Computing
- Blockchain Technology

Academics

- **Ph.D** CSE from Assam University on 31/05/2022.
- **M.Tech (IT)** from Institute of Science and Technology (Gauhati University) in 2012.
- **MCA** from Assam Engineering College in 2008.
- **B.Sc.** from Ramakrishna Mahavidyalaya, under Tripura University in 2005**.**
- **H.S(+2)** under Tripura Board of Secondary Education from Radha Kishore Institution, Kailashahar in 2001.
- **Madhyamik** under Tripura Board of Secondary Education from Radha Kishore Institution, Kailashahar in 1999.

Subject Taught

Organization   : Assam University
Subjects   : Theory of Computation, Complier Design, Information Coding Theory,
                     Advanced Java Programming.

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Organization   : NERIM
Subjects   : Theory of Computation, Computer Networks, Graph Theory, Operating   System.

PhD Thesis Title: **"Design and Implementation Secure Software Defined Network"**

Organization   : Assam University, Silchar.
Purpose   : PhD work.
Duration   : 16th March 2017 – 22nd February 2021.
Description   : This work assess the information risk at the first place and then proposes Blockchain based Access control mechanism to secure the SDN architecture.

MTech Thesis Title: **"Business Model of Cloud Computing"**

Organization   : Indian Institute of Technology, Guwahati.
Purpose   : M.Tech. Project work.
Duration   : 19th August 2011 – 25th May 2012.
Description   : Development of Mathematical model to establish own cloud and how it provide economical benefits both provider and consumer perspective.

JRF Project Title: **"Development of a Framework for Logging and Analysis of Network Traffic to Secure IT Infrastructure: Part A"**

Organization   : Assam University, Silchar.
Purpose   : Research Work in a DIT sponsored project
Role   : Junior Research Fellow.
Duration   : 14 february2009 – 17 august 2010.
Description   : Analyzing the network packets. Finding the anomalies, Capturing   is done through netflow- the network scanner and own java program.

MCA Project Title: "Web Service Implementation of Property Dealings Portal"

Organization   : Quotient Logic, Bangalore, Karnataka.
Purpose   : Academic project for Final Semester.
Role   : Project trainee. (MCA Final Semester)
Duration   : 5 months.
Description   : This project implemented in the Business to Business integration. It helps different people to deal with property like taking rent a house, selling, buying the property.

Publications

Paper Name & Type: **A perceptual blockchain-based SDN architecture and secure access control mechanism.**
Publisher & ISBN   : JISA & 2214-2126. Communicated, IF:3.87, SCIE.

Paper Name & Type: **A Comprehensive Survey of Vulnerability and Information Security in SDN.**
Publisher & ISBN   : Computer Networks & 1389-1286. Under First Revision, IF:4.77, SCIE.

Paper Name & Type: **A Software Defined Network information security risk assessment based on Pythagorean fuzzy sets.**
Publisher & ISBN   : ESWA & 0957-4174. Year: Accepted 2021, IF:6.9, SCIE.

Paper Name & Type: **Dynamic vulnerability assessment of Software defined network.**
Publisher & ISBN   : ISSE & 1614-5054. Year: April 2019, ESCI.

Paper Name & Type: **Common Vulnerability Scoring System for SDN Environment.**
Publisher & ISBN   : IJEAT & 2249-8958, Volume-8 Issue-6, August 2019, Scopus.

Paper Name & Type: **A Review on SDN Principles in Wireless Mesh Network. (UGC Journal)**
Publisher & ISBN   : IOSRJEN & 2250-3021. Vol. 8 Issue 11, Year: November 2018, UGC Journal.

Paper Name & Type: **The Cloud Computing with respect to Provider and Consumer.**
Publisher & ISBN   : IJARCS & 0976-5697. Vol 5. No. 6 Year: July-August, 2014, UGC Journal.

Paper Name & Type: **Cost Modelling of Cloud Computing.**
Publisher & ISBN   : IJARCSSE & 2277 128X. Vol 3. Issue 11, Year: November 2013, UGC Journal.

Conference and Book Chapters

Paper Name & Type: **A Hybrid Cryptographic framework using ECC for Secure Communication in Software Defined Networking.**
Publisher & ISBN   : IEEE, Accepted and Presented, EAIC-2025.

Paper Name & Type: **A Paradigm Shift in Networking: The Role and Architecture of SDN.**
Publisher & ISBN   : Springer-CCIS, Published, ICRCSC-2025.

Paper Name & Type: **Comprehensive Security Analysis and Threat Mitigation Strategies for Software-Defined Networking (SDN) Environments.**
Publisher & ISBN   : IEEE, Published, ISACC-2025.

Paper Name & Type: **A Framework for Blockchain-, AI-, and IoT-Driven Smart and Secure New-Generation Agriculture.**
Publisher & ISBN   : Blockchain for IoT, Published, CRC Press, 2022.

Paper Name & Type: **DDOS Attack on Software-Defined Networks and its Mitigation Techniques.**
Publisher & ISBN   : Springer-CCIS, Published, CICBA-2018.

Paper Name & Type: **Cloud Computing: An Introductory Approach.**
Publisher & ISBN   : "IT Innovation & Sustainability", Excel Books, 978-93-5062-313-8.

Patent Publications

SL	Title	Level	Reference	Granted/ Published
1.	A METHOD FOR DETERMINING THE INDIVIDUAL AND MUTUAL RELATIONSHIP AMONG THE VULNERABILITIES OF SDN ENTITIES	International	2021103338	Granted
2.	IOT BASED SOLAR ASSISTED CLIMATIC READER FARMING ROBOT	National	202131026443	Published
3.	MULTI CAVITY SHOT FOR INJECTION MODULE	National	345354-001	Published

Personal Details

Date of Birth	13th July, 1983

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