Dr.Gaurav Deep



Office: Room Number 308, Department of Computer Science and Engineering, Punjabi University, Patiala-147002, Punjab, India.
Permanent Address: House Number 12-B, Basant Vihar,
Behind Hemkunt Petrol Pump, Sirhind Road, Patiala-147004, Punjab, India.
Email: deepgaurav48@pbi.ac.in, deepgaurav48@gmail.com
Office:+91-175-5136337 **Mobile:**8699979499
ORCID: https://orcid.org/0000-0002-8885-745X
Scopus ID: https://www.scopus.com/authid/detail.uri?authorId=57201697508
Google scholar ID: https://scholar.google.com/citations?user=RkONSbUAAAAJ&hl=en
Researchgate ID: https://www.researchgate.net/profile/Gaurav-Deep-2

Working as Assistant Professor in Department of Computer Science & Engineering, Punjabi University, Patiala, since December 2011. I have been associated with Placement cell from last many years as a SPOC CSE Department, and recently given the charge of Placement Incharge ,Engineering Block.

EXPERIENCE (20 Years)

- Assistant Professor in Department of Computer Science & Engineering, Punjabi University, Patiala since December 23rd,2011
- Senior Lecturer in Department of Computer Science & Engineering ,Faculty of Engineering, Bahra Group of Institutes, Patiala from 17th December,2010 A.N to 22nd December 2011
- Associate Professor/Assistant Professor/Lecturer in Department of Computer Science & Engineering, RIMT-Maharaja Aggrasen Engineering College, Mandi Gobindgarh from 2nd July 2007 to 17th December B.N 2010
- Lecturer in Computer Engineering Department , Thapar Polytechnic College, Patiala from 28th July 2006 to 29th May 2007
- Lecturer in Computer Engineering Department, Mehr Chand Polytechnic, Jalandhar from 14th October 2004 to 26th July 2006

PROFESSIONAL QUALIFICATIONS

- **Ph.D.** from Jaypee University of Information and Technology, Solan
- **M.Tech.** CSE from DAVIET, Jalandhar
- **B.Tech.** CE from JMIT, Radaur(Yamuna nagar)
- **Diploma** in CE from B.I.S Polytechnic, Moga

BRIEF RESEARCH WORK DONE DURING PH.D.

Employees in a cloud service environment manage data storage, movement, user authorisation policies, etc. Authority given as privileges for managing cloud data to employees has become an insider threat that directly affects user confidence, company business and company reputation. Research Work in Ph. D. aims to provide an access control mechanism to prevent insider threats in the distributed cloud environment. It proposes a blockchain-based robust technique for authorisation of log files of insiders in the cloud environment. Insider authentication and activity details are stored in the blockchain. The proposed solution greatly solves the Insider threat issue by providing access control to system logs. A distributed architecture for better insider Authorisation control in the cloud environment with multiple PEP–PDP servers is proposed to achieve significantly better results in scalability and performance. Insiders manage the PEP and PDP servers, so it is required to track their activity. For achieving Data protection, a protocol is suggested in this work, complements the already proposed distributed architecture for better insider Authorisation control in the cloud environment with blockchain server to store all the messages between PEP and PDP.

SOFTWARE SKILLS

Programming (C/C++, Python),NS2/NS3,CupCarbon,Latex, Oracle, Visual Basic, Operating System (Windows ,Ubuntu)

RESEARCH AREA

Cloud Security, Insider threat on Cloud, Green Farming with IOT and Lorawan

RESEARCH INDICES

Scopus:	Citation Index: 68	h-index:4
Google Scholar:	Citation Index:130	h-index:5
M.Tech. Thesis Supervised:	19	
Ph.D. Students Registered:	2	

SUBJECTS HANDLED TILL DATE AT UG AND PG LEVELS OF ENGINEERING

Cloud Computing, Compiler Design, Programming in C++, Database Management System, Object Oriented Programming Using C++, Data Structure using C++, Advance Computer Architecture, and Software Engineering using UML

PUBLICATIONS IN JOURNALS

1. Deep, G., Sidhu, J. & Mohana, R. Distributed PEP–PDP Architecture for Cloud Databases. Wireless Pers Commun 128, 1733–1761 (2023) **(SCIE)**. https://doi.org/10.1007/s11277-022-10017-4

2. Deep, G., Sidhu, J., & Mohana, R. (2022). Insider threat prevention in distributed database as a service cloud environment. Computers & Industrial Engineering, 169, 108278 **(SCIE)**. https://doi.org/10.1016/j.cie.2022.108278

3. Kour, G. & Deep, G. (2022). Covid-19 Detection using PCA with EL in X-ray Images. NeuroQuantology,Volume 20,Issue 20,pp 1379-1393**(SCOPUS)**. https://doi: 10.48047/NQ.2022.20.20.NQ109141

4. Deep, G., Sidhu, J., & Mohana, R. (2021). Investigation and Validation of Distributed PEP-PDP Authorization Architecture in Insider Access Control Mechanism in Scyther, Design Engineering, Issue 7, pp 10487-10496 **(SCOPUS)**

5. Deep, G., Sidhu, J., & Mohana, R. (2020). Access Management of User and Cyber-Physical Device in DBaaS according to Indian IT Laws using Blockchain. Scalable Computing: Practice and Experience, 21(3), 407-424**(ESCI, Now in the Category of SCIE)**.

6. Deep, G.; Mohana, R.; Nayyar, A.; Sanjeevikumar, P.; Hossain, E. Authentication Protocol for Cloud Databases Using Blockchain Mechanism. *Sensors* 2019, *19*, 4444 **(SCIE)**. https://doi.org/10.3390/s19204444

7. Rajni Mohana, G. deep, J. S. (2019). Asymmetric Authentication as a Service in Private Cloud, Formal Validation by Scyther. International Journal of Advanced Science and Technology, 28(19), 710 – 717 **(SCOPUS)**.

8. Deep, G., Mohana, R., & Kaur, P. (2018). Virtual Private Cloud and Authentication: A Review. Asian Journal of Computer Science and Technology, 7(2), 101–106. https://doi.org/10.51983/ajcst-2018.7.2.1862

9. Gaurav deep, R. (2017). Statistical approach for detecting distributed denial of service attacks. Asian Journal of Computer Science and Information Technology, 85-89.

10. Deep, M. M. G. (2017). Comparison of active queue management in ns2. Asian Journal of Computer Science and Information Technology, 79-84.

11. Sidhu, P., & Deep, G. (2017). A REVIEW: ENHANCED STEGANOGRAPHY TECHNIQUE FOR 2D BARCODE IMAGES. International Journal of Advanced Research in Computer Science, 8(7).

12. Rani, M., & Deep, E. G. (2017). Review Paper on Digital X-Ray Image and Steganography. IJRECE, 5(3), 344-348.

13. Rani, R., & Sharma, G. D. (2017). Review Paper on Data Hiding In 3D Barcode Image Using Steganography. International Journal of Advanced Research in Computer Science, 8(5).

14. Singh, G., & Deep, G. (2016). Combined aproach of Steganography and Cryptography in Magnetic Resonance Images. International Journal of Innovations & Advancement in Computer Science,5(6)

15. Grewal, R. S., & Deep, G. To Study the Scope of Data Hiding In Ultrasound Video. International Journal of Modern Computer Science (IJMCS) ISSN: 2320-7868 (Online), Volume No.4, Issue No.2, April, 2016

16. Singh, G., & Deep, G. (2016) MRI Medical Image and Steganography. International Journal of Modern Computer Science (IJMCS) Volume, 4.

17. Kaur, G., & Deep, E. G. (2015). HSI color space conversion steganography using elliptic curve. International Journal of Innovations and Advancement in Computer Science, 4, 63-67.
18. Sharma, N., & Deep, G. (2015). Padding Byte Stuffing: A Technique to Hide Data in MP3. International Journal of Innovations & Advancement in Computer Science, 4(6), 57-62.
19. Sharma, N., & Deep, E. G. (2015). To Study Scope of Data Hiding in MP3 Files. International Journal of Science, Engineering and Computer Technology, 5(6), 138.
20. Kaur, H., & Deep, G. (2015). Level's 4 Security in Image Steganography. International Journal of Computer Applications, 121(23).
21. Kaur, G., & Deep, E. G. D. (2015). To Study Scope Of Data Hiding In Various Image Color Models. International Journal for Technological Research in Engineering, 2(9), 2027-2029.
22 Puri,Y., & & Deep, E. G. D (2015) Image Seeded Steganography: Steganography Using Seed Values. International Journal of Scientific Research and Education. 3(7), 4004-4011
23. Kaur,H., & Deep,G.(2014) A Review : Comparative Study of Various Image Segmentation Algorithms. International Journal of Advanced and Innovative Research (2278-7844) / # 182 / Volume 3 Issue 2
24. Kaur, J., & Deep, G. (2014). A Review: Comparative Study of Image Clustering Algorithms. International Journal of Advanced and Innovative Research (2278-7844) / # 132 / Volume 3 Issue 2
25. Gaba, R., & Deep, G. (2013). Comparison of various video steganography techniques. International Journal of Advanced and Innovative Research (2278-7844), 2(6).

PUBLICATIONS IN BOOK CHAPTERS

1. Deep (2024), IoT-BASED GREEN COMPUTING IN INDIAN HIMALAYAS USING LoRaWAN Book chapter in Precision Agriculture: Bridging Technology and Tradition , ISBN : 978-93-95847-23-0,Volume I,pp. 85-92.
2. Kaur, N., Deep, G. (2021). IoT-Based Brinjal Crop Monitoring System. In: Gupta, D., Hugo C. de Albuquerque, V., Khanna, A., Mehta, P.L. (eds) Smart Sensors for Industrial Internet of Things. Internet of Things. **Springer**, Cham. https://doi.org/10.1007/978-3-030-52624-5_15
3. Kaur, N., & Deep, G. (2019). SIMULATORS FOR THE INTERNET OF THINGS DEVICES. Twentyfirst Century Publications. ISBN: 979-93-89673-30-2, pp 30-35
4. Deep, G. & Mohana,R.(2019). CLOUD SERVICES FOR INTERNET OF THINGS DEVICES. Twentyfirst Century Publications. ISBN: 979-93-89673-30-2, pp 80-85

CONFERENCES

1. G. Deep, J. Sidhu and R. Mohana, "Role of Indian IT Laws in Smart Healthcare Devices in the Intensive Care Unit in India," 2020 Sixth International Conference on Parallel, Distributed and Grid Computing (PDGC), JUIT,Waknaghat, India, 2020, pp. 1-5**(IEEE)**, doi: 10.1109/PDGC50313.2020.9315763.

2. G.Deep,"A Survey on Cooja Simulator,"International Conference on Applications of AIand Machine Learning,Punjabi University,Patiala,2020

3. G.Deep,"Active Queue Management Techniques for Congestion Control:A Review,"2nd International Conference on Research Trends in Engineering,Applied Science and Management, NITTTR, Chandigarh, 2017

4. G.Deep,"Statistical based DDoS Detection Methods:A Review,"2nd International Conference on Research Trends in Engineering,Applied Science and Management,NITTTR,Chandigarh,2017

5. R. Rani and G. Deep, "Digital 3D barcode image as a container for data hiding using steganography," *2017 4th International Conference on Signal Processing, Computing and Control (ISPCC)*, JUIT,Waknaghat, India, 2017, pp. 325-330**(IEEE)**, doi: 10.1109/ISPCC.2017.8269698.

6. G.Deep,"Problem in unit testing ofAOP Modules," National Conference on Impact of Management and Technological Advancements in Technical Education and Industrial Sector,JSSIET,Patiala,2011

7. G.Deep,"Neural Network in Surgical Robots," International Conference on Downtrend Challenges in IT, PCTE, Ludhiana, 2009

8. G.Deep,"Enhancing Data Security with the use of 8 bit Replacement Method in JPEG Image," International Conference on Downtrend Challenges in IT,PCTE,Ludhiana,2009

9. G.Deep,"International Conference on Security and Identity Management, IIMA, 2009

10. G.Deep,"Design and Implementation of an Algorithm using First Component Alteration Technique", National Conference on Moderen Management Practices & Information Technology Trends, DAVIET, Jalandhar, 2009

11. G.Deep,"Role of Neural Network in Medical sciences," National Conference on Emerging Trends in Communication &IT, RIE&IT, Ropar, 2007

12. G.Deep," Role of Datamining and Neural Network in Robotic Learning," National Conference on Challenges & Opportunities in Information Technology,RIMT,Mandi Gobindgarh,2007

SEMINARS

1. G.Deep ,"Role of Green Computing in Ecological Balance," National Seminar on Ecological Crises, Punjabi University, Patiala, 2011

2. Attended Seminar on "E-Contents on EDUSAT" at DAV College, Jalandhar, 2005

PATENT GRANTED

One Design Patent on INDUSTRIAL DIGITIAL ASSISTANTS: IP Australia: AusPat (http://pericles.ipaustralia.gov.au/ols/auspat/adva ncedSearch.do?queryString=2020101596&resultsP erPage=&submit=Search)

Brief Detail : Industrial Digitial Assistants (Ida): Designing and Reorganizing the Workplace Layout for the Industries through AI Techniques during Large Scale Pandemics

E-CONTENT PROGRAMMES

Worked in the capacity of subject expert in the Subject of Computer Architecture at Educational Multimedia Research Centre, Punjabi University, Patiala. For ICT eContent programmes Produced by University Grant Commission Educational TV and Ministry of Human Resource Department (MHRD,India)

ACADEMIC / ADMINISTRATIVE ACTIVITIES

1. Representing as an active member of various department levels committees such as Training and Placement Club, Purchase Committees, along with multiple department-level functions and events
2. Acting as Paper Setter for various universities
3. Contributed proactively as Single Point of Contact (SPOC) for the Placement cell on behalf of the Department of CSE, for organizing and managing various placement drives
4. Worked as an Organizing Secretary, chaired a session at International Conference ICAML 2021
5. Worked as a member of the Organizing team in ICAML 2020
6. Worked as Examination Controller for two times in the Department of CSE, for conducting smooth Mid semester and final examination
7. Worked on Curriculum Updating Work as a subject expert assigned by Department BoS

FACULTY / PROFESSIONAL DEVELOPMENT PROGRAMS

o Certifications on

- Introduction to Amazon Athena,
- Amazon Bedrock getting started,
- Basics of Amazon AWS Services

o Workshop on "Essentials of NBA Accrediation “, Conducted by Department of Computer Science & Engineering, Punjabi University, Patiala on 28/12/2019

o Workshop on "Opportunities and Challenges in Implementation of AICTE Internship Policy,” Conducted by AICTE,New Delhi,on 29/9/2019

o STC on Cloud Computing, conducted by NITTTR, Chandigarh from 27/5/2019 to 31/5/2019

o STC on NS2/3 Simulator, conducted by NITTTR, Chandigarh from 28/1/2019 to 1/2/2019

o FDP on "Embedded Systems & IoT Applications, conducted by E&ICT Academy, IIT Roorkee at CDAC, Mohali from 25/9/2017 to 29/9/2017

o Faculty Enablement program on "Foundation Program 5.0", conducted by Infosys, Chandigarh from 14/12/2016 to 16/12 2016

o Workshop on "Computer Networking and Troubleshooting, Conducted by Department of Computer Engineering, Punjabi University, Patiala on 4/3/2016

o STC on Cyber Threat Detection & Safety, conducted by NITTTR, Chandigarh from 4/1/2016 to 15/1/2016

o Two week STC on "Introduction to algorithms", conducted by IIT Kharagpur from 27th april to 30th May 2015

o FDP on "CSE & IT Curriculum Development ", conducted by Ryat Institute of Engineering & Information Technology, SBS Nagar from29/1/2011 to 30/1/2011

o STC on Network Security, conducted by NITTTR, Chandigarh from 5/2/2007 to 9/2/2007

o STC on Modelling in CAD, conducted by NITTTR, Chandigarh from 6/12/2004 to 10/12/2004

MEMBERSHIP OF PROFESSIONAL BODIES / SOCIETIES

Life Membership of Punjab Academy of Science

Member of the Institute of Engineers of India (IEI)

DECLARATION

All the above-mentioned information is correct to the best of my knowledge and belief.

Dr.Gaurav Deep