Name of Faculty:	Dr. Sugandha Singh	
Designation:	Professor	
Nature of Job/Appointment:	Contract	
Date of Joining:	05 Dec 2022	
E-mail:	sugandhasingh_cse@cbit.ac.in	

Education Qualifications:	**Name of the Degree**	**Class**
Ph. D	Doctor of Philosophy (IT)	Awarded
PG	M. Tech. (CSE)	First
UG	B. E. (CSE)	First
Post Graduate Diploma	PGDM (HR & PR)	First

Work Experience:

Teaching	22 Years
Research	15 years
Industry	--
Others	--

Area of Specialization:	Computer Networks, IoT, Industry 4.0, Business Analytics
Professional Memberships:	1. Senior Member IEEE (90511462) 2. IEEE Women in Engineering 3. IEEE Computer Society 4. IEEE Vehicular Technology Society 5. IEEE Computer Communication 6. Member CSI 7. Member, Computer Science Teacher Association (CSTA) 8. Member, Journal and Event Management System (JEMS) 9. Member, ECEDHA (Electrical and Computer Engineering Department Head Association. 10. Academic Counsel Member-PDM University, GHRCE and HITAM
Responsibilities held at Institution Level:	
Responsibilities held at Department Level:	
Research Guidance:	**1.** 51 Post graduate Students **2.** Three Doctorate Students
Awards Received:	1. Best Teacher Award at JIET Jodhpur, 2009-10 & 2010-11
Courses Handled at Under Graduate / Post Graduate Level	Computer Networks, Operating System, Database management System, Advanced computer Architecture, Cyber Security,
No. of Papers Published	International & National Journals – 28 International & National Conference –23
Projects Carried out	
Patents	1. Invisible Drone: Indian Published (IN-GJ40385995603418T)- Idea Patent 2. Electric Vehicle: Indian Published (IN-GJ86228193997348U- Idea Patent 3. Milk Vending Machine: Submitted for Grant (Application No: 357144-001)- Design Patent
Technology Transfer	NIL
Invited Speaker	Reviewer of International Journal of Wireless Information Networks, Springer and IEEE referred conferences
No. of Books/Chapter Published with details	1. **"Internet of Things- Industry 4.0"** Published by Notion Press March 2022 2. **'Network Unleashed'** published by Laxmi Publications July 2010. 3. **'Introduction to Microprocessor'** published by Kalyani Publishers for Punjab Technical University in 2006. 4. **'Leadership and Change Management'** APGH Publishing house in Sept 2022

Details of Short-Term Training Programs/Faculty Development Programs/Seminars/Workshops. Other Trainings (Attended and/or Organized).

Workshops/Seminars Organized:

1. IEEE Refereed International Conference Latest trends in IT-2007 at PCTE-Ludhiana
2. Technical fest-2007 at PCTE-Ludhiana
3. National Level Technical competition- 2009 at MSIT Delhi
4. IEEE Refereed International Conference on computer engineering and technology-2010 at JIET Jodhpur
5. Prelims Smart India Hackathon'22 at HITAM Hyderabad
6. National EWB Event INNOFIESTA'22 at HITAM Hyderabad
7. Machine Learning 5-day workshop by NITTTR-Chandigarh at PDM University
8. IoT Training and Projects with IIITH at HITAM Hyderabad
9. Establishment of Teaching and Learning Centre at HITAM Hyderabad
10. Establishment of Microsoft innovation center at PDM University.
11. Establishment of SAP Centre at PDM University and GHRCE Nagpur
12. Establishment of CISCO Centre at PDM University, GHRCE, Nagpur and HITAM Hyderabad
13. Establishment of Formula 5 Race Car designing Centre at GHRCE, Nagpur
14. Establishment of IEEE student branch at MSIT Delhi

Workshops/Seminars Attended:

1. National Conference on Global Trends in I.T, at Punjab College of Technical Education, Baddowal (Ludhiana) in April2006.
2. National Seminar on Emerging Technologies in the field of Electronics, Telecommunication and Control System, at C.I.T.M. MREI, Faridabad March 31,200
3. Faculty Development Program on Energy Research and Management, at PDMCE, Bahadurgarh on July 14, 2015.
4. Cisco Networking Academy Conference-2016 at Amity University, Noida
5. Cisco Networking Academy Conference-2017 at Radisson Hotel, Noida
6. Cisco Networking Academy Conference-2018 at Radisson Hotel, Noida
7. ATAL-FDP on Smart Cities Sep 20-24, 2022
8. ATAL-FDP on Quantum Computing Jan 17-21, 2022
9. ATAL-FDP on Intellectual Property Rights Feb 07-11, 2022
10. IUCEE Leadership Summit July 10-11, 2022 GOA
11. EDU Summit April 10-11, 2022, Hyderabad

. Details of Journal Publications/ Conferences (National and International)

1. "Invisible Drone- A new Design to spy", **International Journal of Information Technology**- Paper submitted.
2. "Requirement of Empowering the Faculty", **Webology Journal by Elsevier**, ISSN 1735-188X, Vol 19 No. 2, 2022, PP 8414- 8421
3. "Implementing the Change", **Webology Journal by Elsevier**, ISSN 1735-188X, Vol 19 No. 2, 2022, PP 8405- 8421
4. "Clustering in Mobile Adhoc Network: WCA Algorithm" **Lecture Notes on Data Engineering and Communications Technologies, book series** (LNDECT, volume 26), Dec 2018.
5. "Sentiment Analysis in Disaster Management using Tweets" **International Journal of Computer Science and Mobile computing,** ISSN 2320–088X Vol. 7, Issue 5, May 2018, PP76-82
6. "Review Paper on Development of Mobile Wireless Technologies (1G to 5G)" **International Journal of Computer Science and Mobile computing,** ISSN 2320–088X Vol. 7, Issue 5, May 2018, PP94-100.
7. "SDN and NFV in 5G: Advancements and Challenges" **International Journal of Computer Science and Mobile computing,** ISSN 2320–088X Vol. 7, Issue 5, May 2018, PP101-110
8. "Address Allocation for MANET Merge and Partition using Cluster Based Routing" **International Journal of Wireless Information Networks by Springer**, Paper published on October 16, 2014.

9. "Contrast study of social engineering techniques", **IOSR Journal of Computer Engineering (IOSR-JCE)** e-ISSN: 2278-066, p-ISSN: 2278-8727, Volume 18, Issue 4, Ver. I (Jul.-Aug. 2016), PP66-68

10. "Interfacing and Analysis of GPS data using VB", **IOSR Journal of Computer Engineering (IOSR- JCE)** e-ISSN: 2278-066, p-ISSN: 2278-8727, Volume 18, Issue 4, Ver. I (Jul.-Aug. 2016), PP 69-71

11. "Approaches in Key Management Schemes in Mobile Ad-Hoc Networks: A Review", *IOSR Journal of Computer Engineering (IOSR-JCE)* *e-ISSN: 2278-0661, p-ISSN: 2278-8727, Volume 18, Issue 3, Ver. I (May-Jun. 2016)*

12. "A New Horizon for Efficient Energy Management Using Green Computing", **International Journal of Scientific and Engineering research**. Volume 3, Issue 3, May 2012. ISSN 2229-5518. Impact Factor:3.2

13. "A survey on Infrastructure platform issues in cloud computing", **International Journal of Scientific and Engineering research.** Volume 3, Issue 3, May 2012. ISSN 2229-5518. Impact Factor:3.2

14. "Fault Tolerance: Reliability Mechanism for Transactional Mobile Agent Execution", IJCSI **International Journal of Computer Science Issues**, Vol 9, Issue 3, No.10 May 2012. Impact factor:0.242

15. "Policy Based Decentralized group key security for Mobile Adhoc Networks" **IJCSI International Journal of Computer Science Issues,** Vol 7, Issue 3, No.10 May 2010, pp 44-49. Impact Factor:0.242http://www.ijcsi.org/articles/Policy-based-Decentralized-Group-key-Security-forMobile- Ad-hoc-Networks.php and http://www.scribd.com/doc/33314173/Policy-based-Decentralized-Group-key-Securityfor-Mobile-Ad-hoc-Networks.

16. "Setting up VPN using PPTP", Published in **Journal of Information security JISec**, CISTM (July 31-Aug 2) 2008 at IIT Delhi. pp23-27.

17. "Modified AODV for congestion control in MANET", Published in **International Journal of Computer Science and Mobile Computing**, ISSN- 2320-088X, Volume 4, Issue 6, June 2015, pp 984-1001. Impact Factor:2.417

18. "Congestion Control in Mobile Adhoc Networks: A Survey", Published in **International Journal of Mechanical Engineering and Information Technology**, Volume 3, Issue 6, pp 1293-1303, June 2015, ISSN-2348-196x

19. "Encryption and Decryption for Secure Communication", Published in **International Journal of Engineering, Technology, Management and Applied Sciences**, Volume 3, Issue 6, pp 65-70, ISSN 2349-4476, Impact Factor2.24

20. "Modified Jitsi for SIP request and response communication", Published in **International Journal of Engineering and Innovative Technology**. Impact Factor: 2.137

21. "A Genetic Improved Clustering to Optimize Wireless Sensor Network Communication" Published in **International Journal of Computer Science and Mobile Computing**, Volume 4 Issue 6, june 2015, pp 345-353, ISSN- 2320-088X Impact Factor:20147

22. "Computational Intelligence Techniques for Wireless Sensor Network" Published in **International Journal of Computer Applications**, ISSN- 0975-8887, Volume 118, Issue 14, May 2015, pp 23-27, ISSN 0975-8887, Impact Factor:2.52

23. "Artificial Immune system based statistical model for Intrusion Detection" Published in **International Journal of Computer Science and Mobile Computing**, ISSN- 2320-088X, Volume 4, Issue 6, June 2015, pp 170-176. Impact Factor:2.417

24. "Study of various security attacks in wireless networks" Published in **International Journal of Computer Science and Mobile Computing,** ISSN- 2320-088X, Volume 4, Issue 6, June 2015, pp 249-253. Impact Factor:2.417

25. "BFO based rule mining approach for diabetic patient identification" Published in **International Journal of Computer Science and Mobile Computing**, ISSN- 2320-088X, Volume 4, Issue 6, June 2015, pp 177-186. Impact Factor:2.417

26. "A Study of different classification models for knowledge discovery" Published in **International Journal of Computer Science and Mobile Computing**, ISSN- 2320-088X, Volume 4, Issue 6, June 2015, pp 241-248. Impact Factor:2.417

27. "Two stage classification model for crop disease protection" Published in International **Journal of Computer Science and Mobile Computing**, ISSN- 2320-088X, Volume 4, Issue 6, June 2015, pp 254-259. Impact Factor:2.417

28. "Big data management tools: A Review", **IOSR Journal of Computer Engineering**, Paper Accepted.

International /National Conferences:

1. "Real Time use of Automatic Voice Command Drug Dispenser (VCMD)", **International Conference on Recent Trends in Microelectronics, Automation, Computing and Communication Systems** *(28–30 Dec '22)- Paper Accepted*

2. *"India's Stake in Emerging Technologies",* **Sardar Patel International Conference on Industry 4.0- Nascent Technologies and sustainability for Make in India Initiative** *(23-24 Dec '22)- Paper Accepted*

3. *"Security Concerns in IoT- A survey",* **Sardar Patel International Conference on Industry 4.0- Nascent Technologies and sustainability for Make in India Initiative** *(23-24 Dec '22)- Paper Accepted*

4. "Bitcoin Price Prediction- an Analysis of Various Regression Methods", **2022 IEEE 12th Symposium on Computer Applications & Industrial Electronics (ISCAIE), Malaysia, INSPEC Accession Number:** 21797571, https://ieeexplore.ieee.org/document/9794532

5. "Swarm Intelligence based system: A Review" **Proceeding of International Conference on Computational Science and Applications,** Jan 2020, pp 149–156, ISBN: 978-981-15-0790-8

6. "Optimal design of a K-Fault Tolerant in Mobile Adhoc Network under Cost Constraint", Published in **IEEE xplore and proceedings of International Conference on network and computer science.** April 2011 pp 368-372. **INSPEC Accession Number:** 12096858, **DOI:** 10.1109/ICECTECH.2011.5942117
http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=5942117&url=http%3A%2F%2Fieeexplore.ieee.org%2Fiel5%2F5934630%2F5942036%2F05942117.pdf%3Farnumber%3D5942117

7. "MobilityAdaptiveCrossLayerDesignforReliableRouteDiscoveryinMobileAd-hoc Networks", Published in **IEEE xplore and proceedings of International Conference on Computer Engineering and Technology** at Jodhpur Institute of Engineering and Technology on Nov. 13-14, 2010. ppG01-G07

8. "Adaptive Decision Based Blind Channel Estimation Algorithm for Wireless Communication", Published in **IEEE Xplore and proceedings of International Conference on Computer Engineering and Technology** at Jodhpur Institute of Engineering and Technology on Nov. 13-14, 2010. ppF01-F06

9. "Security for Virtual Private Network", Published in **proceedings of 6thInternational Conference on upcoming trends in IT**, at Punjab College of Technical Education, Ludhiana, pp 111-116, 2010.

10. "Implementation of Sensor Networks", Published in **proceedings of International Conference on Wireless Networks, ICWN 2010, July 12-15, 2010, Las Vegas Nevada, USA**, 2 Volumes. CSREA Press 2010, pp 619-625, ISBN 1-60132-165-1, http://www.dblp.org/db/conf/icwn/icwn2010.html#RaiPS10

11. "Metrics for the Activeness of an Object-Oriented Component Library", Published in the **proceedings of Microsoft referred 2007 World Congress in Computer Science Computer Engineering, and Applied Computing, Las Vegas.**http://www.dblp.org/db/indices/a-tree/h/Hooda:Sugandha.html

12. "Reliable Data transfer at Transport Layer in MANET", Published **in proceedings of Microsoft referred World Congress on Formal Methods in Computer Aided Design,** 2007.LasVegas.

13. "Mobile Agent Based Message Communication in Large Ad hoc Networks through Co-operative Routing using Inter-Agent Negotiation at Rendezvous Points", Published in the **proceedings of International Conference in challenges and development in I.T.**at Punjab College of Technical Education, Ludhiana, pp 102-109,2007.

14. "Signal Switch in MANET's" Published in proceedings of **Microsoft referred The 2007 International Conference on Wireless Networks (**ICWN'07: June 25-28, 2007) pp 233- 239.

15. "Route Choice in Adhoc Networks", Published in **the proceedings of National Conference on Emerging Technologies and Trends in IT, April2007.**

16. "Stable configuration of bandwidth optimization in wireless networks" Published in the **proceedings of Zonal Seminar on 3G Networking optimization and Emerging Communication Technologies organized by the Institute of Electronics and Telecommunication Engineers (IETE), Aug.2007**.

17. "Reliable data transfer at Transport Layer in Ad-hoc Networks", Published in **proceedings of 2nd International Conference on Advanced Computing and Communication Technologies,** Nov, 2007 pp325-332.

18. "Ad hoc Networks in Air Defense" Published in **the proceedings of Seminar on Innovations in Information and communication Technology, Organized by IETE and CSI,** April2007.

19. "Survey: Centralized hierarchical routing in wireless sensor networks" Published **in proceedings of National Conference on Advanced Computing Research, IGU**

Rewari, 2015

20. "Survey on Conferencing and security on Network using Socket Programming" Published **in proceedings of National Conference on Advanced Computing Research, 2015**

21. "Routing in Wireless Sensor Networks", Published in **National Conference on Recent Trends in Communication and Technology,** PDM College of Engineering, Bahadurgarh, March2015

22. "Data Mining Techniques in Agriculture: A Survey" Published in **National Conference on Emerging Computing Technologies and ICT for Development, Department of Computer Science and Applications,** Maharishi Dayanand University, Rohtak, Feb. 2015.

23. "Trusted key management with RSA based Security Policy for MANET" Published in **6th International Conference on Advanced Computing and Communication Technology, September 4-5, 2016**.