Faculty Profile

Name	: Dr.Tripti Sharma
Designation	: Associate Professor
Qualifications	:Ph.D, M.Phil, M.Tech, B.E
Phone	:9891484486
Email	:tripti_sharma@msit.in

Area of Interest/Specialization: Wireless Sensor Network,

Experience : 20+ years
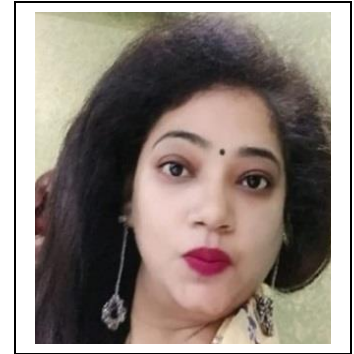
Key Publications

More than 45 papers published in various SCIE,ESCI,SCOPUS International Journal and Conference (**Citations: 293, H-index: 9, i10-index: 8)**

Paper Publication (International Journals)

- G. S. Tomar, T. Sharma and B. Kumar, "Fuzzy Based Ant Colony Optimization Algorithms in Wireless Sensor Network," *Wireless Personal Communication,* Springer, vol. 84, pp 361-375, 2015. ISSN: 0929-6212 (print version), ISSN: 1572-834X (electronic version) *(SCI Indexed, Scopus, INSPEC, SCImago, EI-Compendex, ACM digital library Impact Factor - 0.653)*
  (Citations-25)
- T. Sharma, A.K.Mohapatra, G.S.Tomar," RC-DBSCAN: Redundancy Controlled DBSCAN Algorithms for Densely Deployed Wireless Sensor Network to prolong the network lifespan, International Journal of Computer Application in Technology,Article in press **(ESCI, Scopus indexed,Compendex, ACM Digital Libraray)**
- J.Y Kim, T. Sharma, B. Kumar, G.S.Tomar, K. Berry and W.H. Lee, "IC-ACO: Inter cluster Ant colony Optimization Algorithm for Wireless Sensor Network in Dense Environment," International Journal of Distributed Sensor Network, vol. 2014, pp. 1-10, ISSN:1550-1329(print),ISSN : 1550-1477 (online), *(SCI Indexed, Scopus Indexed, Ei Compendex, ACM Guide to Computing, Impact Factor -0.923)*
  (Citations-65)
- T. Sharma, G. S Tomar, R. Gandhi, S. Taneja and K. Agrawal, "Optimized Genetic Algorithms (OGA) for Homogeneous WSNs," *International Journal of Future Generation Communication and Networking,* vol.8, no. 4, pp. 131-140 2015. *http://dx.doi.org/10.14257/ijfgcn.2015.8.4.1* ISSN: 2233-7857,(**ESCI, ProQuest, ULRICH, EI Compendex)**
  (Citations-10)
- T. Sharma, G.S. Tomar, I. Berry, A. Kapoor and S. Jasuja, "Cluster Head Election with Hexagonal Node Deployment Techniques in Wireless Sensor Network," *International*

Journal of Future Generation Communication and Networking, vol.9, no.1, 2016. pp. 247-258 ***http://dx.doi.org/10.14257/ijfgcn.2016.9.1.22*** ISSN: 2233-7857, **(ESCI(Emerging Source Citation Index), ProQuest, ULRICH, EI Compendex, Google Scholar)**
(Citations-5)

- T. Sharma, A.K.Mohapatra, G. S Tomar, PSOAHA: Particle Swarm Optimization and Ant Colony optimization based hybrid algorithm for large Wireless Sensor Network, "International Journal of Grid and Distributed Computing" vol 13. No.2 , pp. 1293-1305 **(ESCI(Emerging Source Citation Index) , ProQuest, ULRICH, EI Compendex, Google Scholar**

- T. Sharma and B. Kumar, "F-MCHEL :Fuzzy Based Master Cluster Head Election Protocol in Wireless Sensor Network," *International Journal of Computer Science and Telecommunications*, vol 3, issue 10, October 2012, *(Citation-60) I*SSN: 2047-3338 **(DOAJ, Seek digital Library, Google Scholar, ProQuest, Global Impact Factor, Computer Science Directory, Index Copernicus)**
  (Citatios-61)

- T. Sharma, B. Kumar and G.S. Tomar, "Performance Comparison of LEACH, SEP and DEEC Protocols in Wireless Sensor Network," *International Journal of Advances in Computer Networks and its Security,* vol.2, issue1, pp 10-15, Apr 2012. doi:10.3850/978-981-07-1403-1 198 ISSN No.: 2250-3757 **Indexed in iseek Digital Libraries**
  (Citations-39)

- **Tripti Sharma,** Anmol Ashri, Navin Kumar, Shubham Pal, Rajat "Evaluation of Python Text Summarization Libraries" International Journal of Engineering Development and Research, Vol 9, mo.1 , 2021.(Google Scholar)

- **Tripti Sharma,** A.K.Mohapatra, Geetam Singh Tomar, " A review of soft computing based cluster-heads selection algorithms in wireless sensor networks " Materials Today Proceedings, Available online 28 March 2021**(SCOPUS)**

- Rumi Iqbal Doewes, Rajit Nair, **Tripti Sharma,**" Diagnosis of COVID-19 through blood sample using ensemble genetic algorithms and machine learning classifiers, World Journal of Engineering, Available online 1 July 2021.**(SCOPUS, ESCI)**

- T. Sharma, B. Kumar and G.S. Tomar, "OCEA: An Optimal Cluster Energy Aware Routing Protocol for Wireless Sensor Networks," *International Journal of Emerging Sciences*, vol.3 no. 1, pp. 95-107, March 2013*.* ISSN: 2222-4254 **(DOAJ, Seek digital Library, EBSCO, Open J-Gate Google Scholar, Index   Copernicus, (IC value=5.04), Global Impact Factor 0.455)**
  (Citations-09)

- T. Sharma and V. Navani, "Security in WSN: A Survey," *International Journal of Communication System and Network Technologies*, vol.4, no.2, 2015, *DOI-10.18486/ijcsnt.2015.4.2.04,* ISSN 2053-6283 **(DOAJ Indexed, Google Scholar)**

- T. Sharma, B. Kumar and G.S. Tomar, "An Efficient Condensed Cluster Stable Election Protocol in Wireless Sensor Networks," *International Journal of Smart Device and Appliance,* vol.1, no.1, pp 17-28, Dec 2013, ,ISSN: 2288-8977**(Crossref, Google Scholar),**
  (Citations-12)

- T. Sharma, B. Kumar, G.S. Tomar an I.Berry, "Particle Swarm Optimization based Cluster Head Election Approach for wireless Sensor Network," *International Journal of Smart Device and Appliance,* vol.2, no.2, pp 17-28, Dec 2014.   ),ISSN: 2288-8977.**(Crossref, Google Scholar)**
  (Citations-05)
- T. Sharma, "Optimized Genetic Algorithm for Heterogeneous(OGAH) WSNs," *International Journal of Communication System and Network,* vol. 5, no. 2, 2015, ***DOI-*** **10.18486/ijcsn.2015.5.2.05** ISSN 2234-8018 **(DOAJ Indexed, Google scholar)**
- T. Sharma, B. Kumar and G.S. Tomar, "FBRA: Fuzzy Based Redundancy Avoidance Protocol in Densely Deployed Wireless Sensor Network," *International Journal of Smart Device and Appliance,* vol.1, no.1, pp 1-16, Dec 2013. ISSN: 2288-897,**(Crossref, Google Scholar)**
  (Citations-04)
- T. Sharma, H. Ailawadi, K. Singh, and D. Sharma, "Prevention and Detection of Black hole attack in variant of AODV protocol in Manet," *International Journal of Communication System and Network,* vol.5, no.2, 2015, ***DOI-*** **10.18486/ijcsn.2015.5.2.04,** ISSN 2234-8018,**(Crossref, Google Scholar)**
- T. Sharma and B. Kumar, "An Efficient Condensed Cluster Stable Election Protocol in Wireless Sensor Network," *Satyam*, vol.1 no.1, 2013.ISSN: 2319-7897
- T. Sharma, "Comparison of Ant Colony Optimization Algorithms for Routing Problems in Ad Hoc Networks," *Internnational Journal of Communication System and Network Technologies*, vol.4, no.2, 2015. ***DOI-*** 10.18486/ijcsnt.2015.4.2.05 ISSN 2053-6283, **(DOAJ Indexed, Google scholar, Crossref))**
- T. Sharma, "Challenges and Design Metrics of Wireless Sensor Network: A Survey," *Internnational Journal of Communication System and Network Technologies*, vol.4, no.3, 2015. ***DOI- 10.18486/ijcsnt.2015.4.3.05,***ISSN 2053-6283,**(DOAJ Indexed, Google Scholar, Crossref)**
- T. Sharma, "Review of Hierarchical Network Routing Protocols in Wireless Sensor Network," *International Journal of Communication System and Network*, vol. 5, no. 3, 2015 *DOI- 10.18486/ijcsn.2015.5.3.03.*ISSN 2234-8018, **(Google scholar, Crossref)**
- T. Sharma, K. Singh, D. Sharma and H. Alhawadi, "Prevention and Detection of Black Hole Attack in Manet: A survey," *An International E-Journal on Emerging Trends in Science ,Technology , vol. 1, no 2,* Dec 2015.ISSN NO: 2454-1958, **(Directory of Science, Google Scholar)**
- T. Sharma, A. Narain, and P. Handa,"A Comprehensive Survey on Routing Protocols in IEEE 802.6," *An International E-Journal on Emerging Trends in Science ,Technology, vol. 1, no 2,* Dec 2015.ISSN NO: 2454-1958**(Directory of Science, Google Scholar)**
- T. Sharma, R. Gandhi, S. Taneja and K. Agrawal, "WSN Protocols based on Genetic Algorithms: A survey," *Internnational Journal of Communication System and Network Technologies*, vol. 4. no. 3, 2015, ***DOI-*** **10.18486/ijcsnt.2015.4.3.05** ,ISSN 2053-6283,**(DOAJ Indexed, Google Scholar, crossref)**
- T.Sharma,I.Berry,A.Kapoor,S.Jasuja,, "Hexagonal Node Deployment Technique in Wireless Sensor Networks", *International Journal of Communication System and Network,* vol. 5, no. 2, 2015, ***DOI-*** **10.18486/ijcsn.2015.5.2.03,**ISSN 2234-8018,**(DOAJ Indexed, Google scholar)**

- T. Sharma, "Force Directed Placement:GPU Implementation," *An International E-Journal on Emerging Trends in Science* ,Technology, *vol. 1, no 2,* Dec 2015.ISSN NO: 2454-1958 **(Directory of Science, Google Scholar)**
- T. Sharma, A.Mohapatra, G.S. Tomar, " FDBSCAN: Fuzzy based DBSCAN algorithm for densely deployed wireless sensor network for prolonging network lifetime" *Internnational Journal of Communication System and Network Technologies*, vol. 6. no. 2, 2017, IJCSNT Vol.6, No.2, 2017,DOI- 10.18486/ijcsnt.2017.6.2.02,ISSN 2053-6283,**(DOAJ Indexed, Google Scholar, Crossref)**
- T. Sharma, "Routing in Wireless Sensor Network: A Survey," *Internnational Journal of Communication System and Network Technologies*, vol.4, no. 3, 2015. ***DOI-10.18486/ijcsnt.2015.4.3.04,***ISSN 2053-6283,**(DOAJ Indexed, Google Scholar, Crossref)**
- T.Sharma, "Comparison of Bacteria Foraging Optimization Algorithm and Its Variants in WSN", International Journal of Innovation in Engineering Research & Management,vol. 6, no.2, 2019, pp.1-5,(Indexed in :Directory of research journal ,Index Copernicus, DOAJ, Google Scholar)
- T.Sharma, "Data Aggregation in wireless sensor network", Accent Journal of Economics Ecology & Engineering, Vol4(5),Pp 1-4,2019.
   (Indexed in :Directory of research journal ,Index Copernicus, DOAJ, Google Scholar)
- T. Sharma, "Effects of high node density in a WSN and possible methods to overcome problems associated with it", An International E-Journal on Emerging Trends in Science, Technology and Management, Vol3(1) pp-34-39, 2018
   (Indexed in Directory of Science , Google Scholar)
- "Outliers in Wireless Sensor Network: A Survey", An International E-Journal on Emerging Trends in Science, Technology and Management,Vol2(3), pp 137-145
   (Indexed in Directory of Science , Google Scholar)

Papers presented in Conferences

- G. S. Tomar, T. Sharma, D. Bhattacharyya and T. H. Kim, "Performance Comparision of **AODV**, DSR and DSDV under Various Network Conditions: A Survey," *Proceedings of the 2011 International Conference on Ubiquitous Computing and Multimedia Applications*, pp 3-7, Daejeon, April 2011. DOI:10.1109/UCMA.2011.9. Print ISBN: 978-1-4577-0571-7
   (Publisher IEEE, Citations-39)
- R. Bahl, C. M. Sharma and T. Sharma,"Effect of Traffic Interval on Buffering in Go-Back-2 Network in NS2, Asia International Conference on Modelling & Simulation, pp. 248-241, Kuala Lumpur, May 2011. DOI:10.1109/AMS.2011.53. Print ISBN: 978-1-4577-0193-1
   (Publisher IEEE)
   T. Sharma, B. Kumar and G.S. Tomar, "Performance Comparison of LEACH, SEP and DEEC Protocols in Wireless Sensor Network, "*Proceedings of UACEE International Conference of Advances in Computer Science and Electronics Engineering*, pp. 10-15, New Delhi, February, 2012. **DOI:** 10.3850/978-981-07-1403-1_198 **,** Print **ISBN:** 978-981-07-1403-1
   (Publisher UACEE, Citations-*37*)

- T. Sharma, B. Kumar, K. Berry, A. Dhawan, R. S. Rathore and V. Gupta, "Ant Based Cluster Head Election Algorithm in Wireless Sensor Network to Avoid Redundancy," Communication System and Network Technologies (CSNT),pp 83-88, Bhopal, May 2014. DOI:10.1109/CSNT.2014.25., Print ISBN: 978-1-4799-3069-2
  (Publisher IEEE, Citations-18)
- T. Sharma, A.Narain, P.Handa, "Performance Comparison of AODV,DSR and DSDV routing protocol for WiMax mash Networks ," 2016 3rd International Conference on Computing for Sustainable Global Development (INDIACom) *, PP:2624-2627,* Print ISBN: 978-93-84935-45-0. 5
  (Publisher IEEE, Citations-1)
- T.Sharma, A.K.Mohapatra,G.S.Tomar" Fuzzy-Based DBSCAN Algorithm to Elect Master Cluster Head and Enhance the Network Lifetime and Avoid Redundancy inWireless Sensor Network", International Conference on Innovative Computing and Communications, New Delhi**, Feb 2020,pp.1031-1042, Print ISBN: 978-981-15-5147-**
  (Publisher Springer)
- T.Sharma, A.K.Mohapatra,G.S.Tomar "AEECC-SEP: Ant-Based Energy Efficient Condensed Cluster Stable Election Protocol in Wireless Sensor Network", International Conference on Innovative Computing and Communications, New Delhi ,Feb 2020, pp-1125-113,Print ISBN:978-981-15-5148-5,

  (Publisher, Springer, Citation :01)

Awards and Recognitions

- University Topper in M.Tech, secured G**OLD MEDAL**.
- Received **Best Faculty Award** for the year 2015 in Maharaja Surajmal Institute of Technology.
- Received **Certificate of Appreciation** for the year 2014 for outstanding contribution in teaching and research in IT Department.
- **Certificate of Appreciation** from president SMES for outstanding result for 3 continuous years.
- **Qualified GATE 2001** (Computer Science).
- Silver Medalist in **National Talent Test Search Competition** at school level.
- Got teaching assistantship during M. Tech.
- Three Time in the list of university's top-ten rankers in B.E.
- Reviewer of various international conference.

Patent/Copyright

1. Tripti Sharma et al., "Development of Renewable Solar PV inverter with Grid Tie for Utility Powerbased on IOT" published on 5 March, 2021 with application no. 202121008396.

2. Dr. Tripti Sharma, Dr. Rinky Dwivedi, Dr Koyel Datta Gupta, Dr. Rekha Tripathi, Dr. Archana Balyan, Dr. Meena Rao "Method for authenticating and validating quick response code" published on 9 April,2021 with application no. 202121010704 A.

3. Dr.Tripti Sharma et al., "IOT based Autonomous Post Pandemic HealthCare MonitoringSystem"published on 12/03/2021 with application no 202131006190.

4. Dr. Tripti Sharma et al., "Privacy Preserving Authentication and Key-Management Protocol for Health Information System" Grated on 21/04/2021 with application no 2021101195

Book Chapter/Books published

1. "AEECC-SEP: Ant-Based Energy Efficient Condensed Cluster Stable Election Protocol in Wireless Sensor Network" International Conference on Innovative Computing and Communications, Springer, Singapore,2020

2. DBSCAN Algorithm to Elect Master Cluster Head and Enhance the Network Lifetime and Avoid Redundancy in Wireless Sensor, Springer, Singapore,2020

Memberships of Professional bodies: ISTE Membership

Trainings and FDPs

S No.	Name of Training	Name of Training Institution, City	Type of Training and FDPs	Period	
				From	To
1	Use of ICT in Engineering Education	Maharja Surajmal Institute of Technology	AICTE-ISTE approved Orientation/Refresher Programme	07th April, 2021	3th April, 2021.
2	Recent Advancements and Challenges in IT	Maharja Surajmal Institute of Technology	FDP	08th March, 2021	12th March, 2021.
3	Data Analysis Using Pytrhon	Maharja Surajmal Institute of Technology	FDP	28 December 2020	1st January 2021
4	Block chain and Machine Learning	Gurukul Kangri Vishwavidyalaya, hARIDWAR	Short Term Training Course	29th June 2020	03 July 2020
5	International online FDP on Recent Advances in Computer Science and allied Domains	SHARDA University Noida	FDP	8th June 2020	12th June 2020
6	Machine Learning Algorithms: Supervised Learning Tip to Tail	Albert Machine Intelligence Institute offered through Coursera	Training	May 2020	June 2020
7	"Indian Electricity Rules and Code of Practices"	NITTR KolKatta, held at MSIT	Short Term Training Course	16/12/2019	20/12/2019
8	ICT based Short Term Training Programme (STTP) on the topic of	NITTR Chandigarh, held at MSIT	Short Term Training Course	18/11/2019	22/11/2019
9	Contemporary Issues and Challenges in Management Education & Information Technology	MSIT, New Delhi	FDP	5th Feb 2019	9th Feb 2019
10	Open Source Technologies	NITTR Chandigarh, held at MSIT	Short Term Course	03 Dec 2018	07 Dec 2018
11	Data Science Using R through ICT	NITTR Chandigarh, held at MSIT	Short Term Course	26th November 2018	30th November 2018
12	STC on 4G & 5G through ICT	NITTR Chandigarh, held at MSIT	Short Term Course	19 September 2018	21st September 2018
13	Classroom Communication through ICT	NITTR Chandigarh, held at MSIT	Short Term Course	28 May 2018	1 June 2018
14	Modelling and Simulation using	NITTR Chandigarh, held at MSIT	Short Term Course	21 May 2018	25 May 2018

	MATLAB				
15	Wireless Networks through ICT	NITTR Chandigarh, held at MSIT	Short Term Course	22 May 2017	26 May 2017
16	New Paradigm in Software Engineering	MSIT, New Delhi	FDP	19 January 2017	
17	Emerging Trends in Information Technology	MSIT, New Delhi	FDP	29th Feb 2016	4th March 2016
18	Network Simulator	BSIT, New Delhi	FDP	19th August 2012	
19	Intelligent tools for various Engineering Applications	MSIT, New Delhi	FDP	12th April2012	13th April2012
20	Internal Quality Auditors Training Programme	MSIT, New Delhi	Training Programme	March 02 2012	
21	Fuzzy Logic and Neural Networks: An Approach to soft computing	MSIT, New Delhi	FDP	4th Nov 2011	5th Nov 2011

Conferences/ Workshops/ Seminars/Webinars Attended

S No.	Name of Conferences/ Workshops/ Seminars	Name of Institution, City	Type of Conferences/ Workshops/ Seminars	Period	
				From	To
1	"Cyber Crime against women Challenges and Safety Measures"	Delhi State Legal Services Authority & Haryana State Legal Services, GGSIPU	webinar	27 July 2020	
2	Webinar on Internet of Things (IoT) – Industrial Perspective	BVICAM, New Delhi	webinar	11 July	
3	Handshaking on AI and Cyber Security	St.Joseph Instutute of Technology, Chennai	Webinar	27 June 2020	
4	Stress Management during covid-19	IQAC,Jagannath University,Jaipur	Webinar	26 June	
5	Overcoming stress and Anxiety during COVID-19 Pandemic	Jointly organized by Rajkiya Engineering college Mainpuri and IPS College of Technology & Management Gwalior, India	International Webinar	24 June 2020	
6	Patent Filing and its Significance	IPS College of Technology & Management	Webinar	26 June 2020	

		Gwalior, India			
7	Gender Bias & Stereotyping, Gender Equality & Woman Rights	Jagannath Gupta Institute of Engineering and Technology,Jaipur	Webinar	23 June 2020	
8	Energy Efficiency in Smart Building through IoT Sensor Integration	Magharaja Suarjmal Institute of Technology, New Delhi	Webinar	20 June 2020	
9	International Conference on Artificial Intelligence and Applications	Magharaja Suarjmal Institute of Technology	Conference	6 February 2020	7 February 2020
9	Advances on Speech Technology A Towards Intelligent Human Computer Interaction	MSIT, New Delhi	National Seminar	27th November 2017	28th November 2017
10	Paradigm Shift from developing to Developed India through -Digitization	MSI, New Delhi	National Conference	28th July 2017	29th July 2017
11	Implementation of Big Data and Hadoop	MSIT, New Delhi	Workshop	31ST October	1st November 2014
12	Communication System and Network Technologies	NITTR Bhopal, Madhya pradesh	Conference	7 April	9 April
13	Publishing Connect conducted by Elsevier	GGSIPU	workshop	11September 2013	
14	Cloud computing and its components	MSIT, New Delhi	workshop	30th October 2013	31st October 2013
15	Human Values and Professional Ethics	MSIT, New Delhi	Workshop	4th Feb2012	
16	Data Mining-Research Issues, Recent Trends & PASW Modeler 12.0 based Implementation	IGIT, GGSIPU	Workshop	4th March2011	5TH March 2011
17	Emerging Trends in Technical Education	MSIT, New Delhi	Seminar		
18	High Impact Teaching Skills	MSIT, New Delhi	Workshop	8th Feb 2010	12TH Feb 2010
19	High Impact Teaching Skills	MSIT, New Delhi	Workshop	8th Feb 2010	12TH Feb 2010
20	One day Data Mining Workshop using SPSS Clementine	AIT New Delhi	Workshop	27TH Feb 2009	
21	New paradigm in Computing	Bhai Parmanand Institute	Seminar	25 February	
22	Teaching technique and Methodology	MSIT. New Delhi	Seminar	17 Jan 2004	

Other Contributions

- HOD–IT Department (December 20018 –August 2020)
- HOD–IT Department, Second Shift (August 2016–December 2016)
- HOD–IT Department (August 2008 –January 2013)
- MR-ISO (August 2013-217)
- Convener Annual Day 2012, Convener for Annual Day 2012 for MSI, MSIT and MSIP.
- Co-Convener Annual day 2011, 2013, 2014,2015,2016,2017,2018,2019,2020
- In-charge Shri Ram Niwas Mirdha Memorial Lecture 2012
- Teachers representative in Governing Body (Aug 2015-march 2017)
- Convener Technical Fest 2005 , 2019
- Exam Cell Incharge (2016-2017)
- NBA Coordinator (2016-2019)
- NAAC Core team member
- Convener Exam cell (2016-2017)
- Convener Library Committee 2017-2019
- Co-convener-GGSIPU Academic Audit 2018-2019
- Core committee member International Conference organized in MSIT ICAIA 2020.
- Other duties handled: Website In-charge, Software In-charge, Project Coordinator, Internet Incharge, Mentor, Proctor, Sports and cultural activities, FDP coordinator.