

Faculty Profile

Faculty Name	Swati Gupta
Designation	Head of Department
Qualification	Ph.D(Pursuing), M.E.(Distinction), B.E.(Hons.)
Email	hod.ece@piet.co.in
Area of Interest	Sensor Networks and Wireless Communication, IoT
Work Experience (Total)	18 years 9 months
<ul style="list-style-type: none"> • Teaching 	18 years 4 months
<ul style="list-style-type: none"> • Research 	5 months
<ul style="list-style-type: none"> • Industry 	
<ul style="list-style-type: none"> • Others 	
Courses taught at Diploma/ Post Diploma/ Under Graduate/ Post Graduate/ Post Graduate Diploma Level	Wireless and Mobile Communication, Digital Electronics, Computer Architecture and Organization, Analog Communication, Computer Hardware Design, Computer Networks, Digital Signal Processing
Membership of Professional Bodies	<ul style="list-style-type: none"> ▪ International Association of Engineers(IAENG) ▪ Society of Digital Information and Wireless Communication (SDIWC)
Research Publications	21
<ul style="list-style-type: none"> • Research Papers UGC-CARE 	1
<ul style="list-style-type: none"> • Research Papers SCOPUS 	3
<ul style="list-style-type: none"> • Research Papers WoS/SCI/ABDC 	
<ul style="list-style-type: none"> • List of Publications 	Attached
Book and Chapter Publications	
<ul style="list-style-type: none"> • Books Authored published by International Publishers 	
<ul style="list-style-type: none"> • Books Authored published by National Publishers 	
<ul style="list-style-type: none"> • Publication of Chapter in Edited Books 	
<ul style="list-style-type: none"> • Editor of Book by International Publishers 	1 (Internet of Things: Energy, Industry, and Healthcare by CRC Press, Taylor and Francis Group, ISBN 9780367686529)

<ul style="list-style-type: none"> • Editor of Book by National Publishers 	
<ul style="list-style-type: none"> • Translation Work of Book 	
<ul style="list-style-type: none"> • List of Book and Chapter Publications 	
Patents	
<ul style="list-style-type: none"> • Published 	2
<ul style="list-style-type: none"> • List of published patent(s) 	<ul style="list-style-type: none"> • Smart Garbage Monitoring System using Raspberry pi with the pi camera, Application no.-202011004634 • Smart Farming with AI – Green IoT , Application no. - 202011008833
<ul style="list-style-type: none"> • Filed 	1
<ul style="list-style-type: none"> • List of filed patent(s) 	<ul style="list-style-type: none"> • A Novel System for Category based Content recommendation using Artificial Intelligence(AI) and Neuro Linguistic Programming (NLP) and method thereof, Application No. 202111022160
PhD Guidance	
<ul style="list-style-type: none"> • Degree Awarded 	
<ul style="list-style-type: none"> • Thesis Submitted 	
M.Tech. Guidance	
<ul style="list-style-type: none"> • Degree Awarded 	8
<ul style="list-style-type: none"> • Thesis Submitted 	
Research Project	
<ul style="list-style-type: none"> • List of Research project 	
Consultancy	
<ul style="list-style-type: none"> • List of Consultancy 	
Awards & Honours	
<ul style="list-style-type: none"> • List of Awards & Honours 	
Invited lectures / Resource Person/ paper presentation in Seminars/ Conferences/full paper in Conference	
<ul style="list-style-type: none"> • International (Abroad) 	
<ul style="list-style-type: none"> • International (Within Country) 	<ul style="list-style-type: none"> • Session Chair in 4th International Conference on Intelligent Computing

	<p>and Communication (ICICC 2020) by Springer and CSI.</p> <ul style="list-style-type: none"> • Technical Program Committee Member in World Conference on Applied Science, Engineering and Technology (WCASET-Scopus) ,Goa, 2019 • Technical Program Committee Member in 4th IEEE International Conference on Next Generation Computing Technologies (NGCT-2018-SPRINGER) to be held on 26-27 October, 2018. • Technical Program Committee Member in in 4th International Conference on Intelligent Computing and Communication (ICICC 2020) by Springer and CSI.
<ul style="list-style-type: none"> • National 	
<ul style="list-style-type: none"> • List of published papers 	
<p>Organizing National Conference/ International Conference/ FDP/STTP</p>	
<ul style="list-style-type: none"> • List of Conference/FDP/STTP committee 	<ul style="list-style-type: none"> • Organizing Team Member of International conference ISATN held at PIET organized by Panipat Institute of Engineering & Technology (PIET) ,2019 • Organizing Team Member of AICTE sponsored STTP on ‘Design of Soft Computing based Machine Learning Models’ 2021 • Convener of 6 day FDP on ‘Recent Trends in Communication Technologies, Electronics and Communication Engineering Department, PIET, 2016 • Convener of one week FDP on ‘Recent

	Trends in Signal and Data Processing' in Communication Technologies, Electronics and Communication Engineering Department, PIET, 2020
Social Contributions and Sports	
<ul style="list-style-type: none"> • List of Social Contributions and Sports 	

List of Publications

Journals

- Gupta Swati, Mehra Rajesh, "Reconfigurable Efficient Design of Viterbi Decoder for Wireless Communication Systems", International Journal of Advanced Computer Science and Applications(IJACSA), Vol. 2, Issue 7, July 2011, pp. 132-136.
- Gupta Swati, Mehra Rajesh, "FPGA Implementation of Viterbi Decoder using Traceback Architecture", International Journal of Engineering Trends and Technology(IJETT), Vol.1,Issue 1, May- June 2011, pp. 131-134, ISSN: 2231-5381.
- Gupta Swati, "Power Efficient Viterbi Decoder using TraceBack architecture", International Journal of Engineering Sciences and Research Technology (IJESRT), Vol.2, Issue 1, Jan 2013,pp. 647-650, ISSN: 2277 – 9655
- Bhoria Renu, Gupta Swati, "A Study of the effect of sound on EEG", International Journal of Electronics and Computer Science Engineering (IJECSE), Vol.2, Issue 1,pp. 88-93, ISSN: 2277-1956
- Thakral Nishtha, Gupta Swati, "Wireless Sensor Network : A Survey", International Journal of Innovations and Advancement in Computer Science (IJIACS), Vol.4, Issue 2, Feb 2015, pp. 78-85, ISSN: 2347 -8616
- Gupta Swati, Thakral Nishtha "Weighted Tree Hybrid Cluster Selection for Improving Network Lifetime and communication in Wireless Sensor Networks.", International Journal of Electronics, Electrical and Computational System (IJEECS), Vol.4, Issue 2, Feb 2015, pp. 78-85, ISSN: 2348 -117X
- Yadav Manmohan, Gupta Swati, "A Novel Approach for Image Denoising using Wavelet Transforms", International Journal of Engineering Research and Management (IJERM), Vol.2, Issue 1, Jan 2015, ISSN: 2349-2058
- Airn Vipin, Gupta Swati "High Speed Efficient Data Transmission in MPLS Ring Network", International Journal of Exploring emerging Trends in Engineering, Vol.3, Issue 3, Jun 2016, pp. 221-227, ISSN: 2394-0573
- Swati Gupta, Arun Kumar Rana, Ayodeji Olalekan Salau, Sandeep Arora, "Survey of Machine Learning MethodsWhat's More, Their Sensors and IoT Applications for Future World", International Journal of Engineering and Advanced Technology (IJEAT) , Volume-8 Issue-1, October 2018
- Swati Gupta, Arun Kumar Rana , "Wireless Sensor Networks: A review on Challenges and Opportunities for the Future world-LTE", Amity Journal of Computational Sciences (AJCS), ISSN: 2456-6616 (online); Volume: 1, Issue: 2, December 2017

- Kumar, A., Salau, A. O., Gupta, S., & Paliwal, K. (2019). Recent trends in IoT and its requisition with IoT built engineering: A review. In *Advances in Signal Processing and Communication* (pp. 15-25). Springer, Singapore.
- Swati Gupta, Niraj Pratap Singh, “Residual Energy and Throughput Enhancement in Underwater Sensor Network Routing using Backward Forwarding” in Springer proceedings (AISC/LNNS Series) *Lect. Notes in Networks, Syst., Vol. 197* , 2021
- Swati Gupta, Niraj Pratap Singh, “Energy Efficient Void Avoidance Routing For Reduced Latency in Underwater WSNs”, Springer Proceedings in “Lecture Notes in Networks and Systems”, 2021

Conferences

- ‘Frequency Planning Model for Restructuring Mobile Telephone System’ in National Level Conference on ‘Current Trends in Technology’ organized by Institute of Technology, Nirma University of Science and Technology, Ahmedabad. (30 Nov – 2 Dec 2006).
- ‘Robotics – Medical Applications’ in AICTE sponsored National Level Seminar on ‘Robotics and Automation’ organized by N.C. College of Engg., Israna, Panipat. (30-31 March 2007)
- ‘Wireless Systems – 3G and Beyond 3G’ in National conference on ‘Grand challenges in Electrical engineering’ sponsored by Department of Science and Technology, Ministry of Science and Technology and ISTE organized by Rayat Institute of Engg. and Information Technology, Ropar. (28-29 April 2007)
- ‘Methods to calculate the MTF of Mobile Camera Image System’ in National Conference on ‘Emerging Trends in Electronics and Communication Engineering-2011’ conducted by Panipat Institute of Engineering and Technology, Samalkha (20-21 April 2011)
- ‘Modulation Transfer Function of Mobile Camera Image System’ in National Conference on ‘Advancements of Electronics and Communication Engineering and Technology (AECTE-2011)’, organized by IIMT College of Engineering, Greater Nodia, (17-18 Feb 2011)
- ‘Internet of Everything : A Review on Opportunity for Financial Services’ in National Conference on ‘Digital disruption :The Challenges and Opportunities’ organized by Department of Management Studies, Panipat Institute of Engineering and Technology, Samalkha, (30 June 2017)
- Swati Gupta, Niraj Pratap Singh, “ Underwater Sensor Networks : Routing Issues and Challenges” National Conference on Innovations in Computing, Electronics and Communication Engineering (NCICECE 2020),NIT Kurukshetra, July 25-26, 2020