Faculty Profile

Name	: Dr Parul Chaudhary
Designation	: Assistant Professor
Qualifications	: Ph.D., M.Tech. , B.E (ECE)
Phone	: **011-25528117/25552667-138**
Email	: parul@msit.in

Area of Interest/Specialization: Energy Harvesting, Triboelectric Material,

Piezoelectricity, IOT, Applications

Experience : 14 years

Key Publications

1. **Parul Chaudhary** and Puneet Azad, "Energy Harvesting Using Shoe Embedded with Piezoelectric Material," *Journal of Electronic Materials*, vol. 49, no. 11, pp. 6455–6464, Aug. 2020. **SCI-E INDEXED, IMPACT FACTOR=1.938**

2. **Parul Chaudhary** and Puneet Azad, "Energy Harvesting from Human Biomechanical Energy for Health-monitoring Devices," *IETE Journal of Research*, vol. 67, no. 1, pp. 74–81, 2021. **SCI-E INDEXED, IMPACT FACTOR=2.333**

3. Banerjee, P.; Roy, S.; Modibbo, U.M.; Pandey, S.K.; **Chaudhary, P**.; Sinha, A.; Singh, N.K, "OptiDJS+: A Next-Generation Enhanced Dynamic Johnson Sequencing Algorithm for Efficient Resource Scheduling in Distributed Overloading within Cloud Computing Environment", *Electronics* **,** *12*, 4123,2023. **SCI INDEXED**

4. Meena Rao, **Parul Chaudhary**, Kavita Sheoran, Geetika Dhand, "A secure routing protocol using hybrid deep regression based trust evaluation and clustering for mobile ad-hoc network", *Peer-to-Peer Networking and Applications,* Springer, Volume 16, pages 2794–2810, 2nd October 2023. (2023). **SCIE, Scopus, and UGC Indexed,**

5. Meena Rao, **Parul Chaudhary**, Amina Jafri, Mohd. Shaikhul Ashraf, "Approaches for New Product Development in Biotechnology: An Empirical Study on Problem Inventory Analysis", *African Journal of Biological Sciences*, Vol. 6, Issue 6, pp. 6661- 6669, 2nd July 2024, **SCOPUS Indexed**, ISSN: 2663-2187.

6. **Parul Chaudhary**, Rohit Sharma, Meena Rao, Mohit Tiwari, "Role of Machine Learning Applications in Enhancing Cyber Security Effectiveness: An Empirical Study", *Rivista Italiana di Filosofia Analitica Junior*, Vol. 14, No.1, pp. 405-411, 2023, **ESCI,** ISSN: 2037-4445

7. **Parul Chaudhary,**" Analysis of Power dissipation in drift region of 6H-silicon Carbide Dimosfet", IOSR journal,5,59-64,2014

8. **Parul Chaudhary**," Smart Assistive Technology for Differently-Abled Persons", *I*nternational Journal of All Research Education and Scientific Methods (IJARESM),10(9),234-239,2022

Papers presented in Conferences

1. Parul Chaudhary and Puneet Azad, "Demonstration of double electrode vertical-sliding triboelectric generator." In *2017 International Conference on Computing, Communication and Automation (ICCCA)*, 1483-1487. IEEE, 2017

2. P. Chaudhary and P. Azad, "Power optimization in Triboelectric Energy Harvester ," presented at *ELSEVIER-SSRN Int. Electrical & Electronics Engineering Conf., IEEEC 2021,* DTU Delhi, October 23-24, 2021.

Awards and Recognitions

1. UGC-NET Qualified
2. Letter of Appreciation given by Maharaja Surajmal Institute of Technology in January 2024
3. Certificate of Excellence in Research for the year 2023 awarded by Maharaja Surajmal Institute of Technology
4. Certificate of Merit from IIT Kharagpur 2023

Book Chapter/Books published

1. P. Chaudhary Parul and Azad, "**Efficiency Enhancement in a Piezoelectric Energy Harvester for a Low-Frequency System Using Synchronous Charge Inversion**," in *Innovations in Cyber Physical Systems ,*J. Singh, S. Kumar, U. Choudhury, Eds. Springer, Singapore, 2021, pp. 497–503.

Memberships of Professional bodies : Lifetime Member of ISTE society

Patent

1) Artificial Intelligence, Big Data, Internet of Things and Blockchain Techniques and Applications in Smart Energy Management. Application Number – 202311087301. Date of filing – 20-12-2023 Date of Publication – 19-01-2024.

2) Agricultural Farm analyzing system using IoT, Patent Application no. 367698-001.Date of filing:06/07/2022, Date of Publication:30/03/2023

3) Device to harvest energy from roots, Patent application no. 367577-001 A, Publication Date: 12/07/2022.

4) Bowl to identify the content in a mixture. Patent application number 362144-001, Publication Date:07/04/2022

Certifications and courses:

● IIT Kharagpur AI4ICPS Certificate Programme on "Hands-on Approach to AI for Real-world Applications (HAAI)" (Collaboration between IIT Kharagpur and TCS ION) – **Awarded "Certificate of Merit"**.

● NPTEL certification course on "Introduction to Industry 4.0 and Industrial Internet of Things"

● NPTEL certification course on "Introduction to Internet of Things"

● Two weeks Industrial Training Programme on "Deep Learning"

● Attended FDPs on "IOT", "IOT with Machine Learning", "Recent advancements in Machine Learning and AI" etc.