



**Prof. S. Wazed Ali**

**Department of Textile and Fibre Engineering**

**Research Expertise**

Electro-active Polymers and Textiles, Nanotechnology in Functional Materials (Polymers & Textiles), Eco-friendly/Green Chemical Processing of Textiles



**Prof. Pushpapraj Singh**

**Centre for Applied Research in Electronics**

**Research Expertise**

Piezoresistive MEMS, MEMS sensors for flexible electronics, MEMS Non Volatile Memory, Magnetic Tunnel Junction based MEMS Sensor, Electromechanical Switching Device



**Prof. Bipin Kumar**

**Department of Textile and Fibre Engineering**

**Research Expertise**

Fabric Engineering, Functional Textiles, Medical Textiles, Textile/Polymer Physics and Mechanics



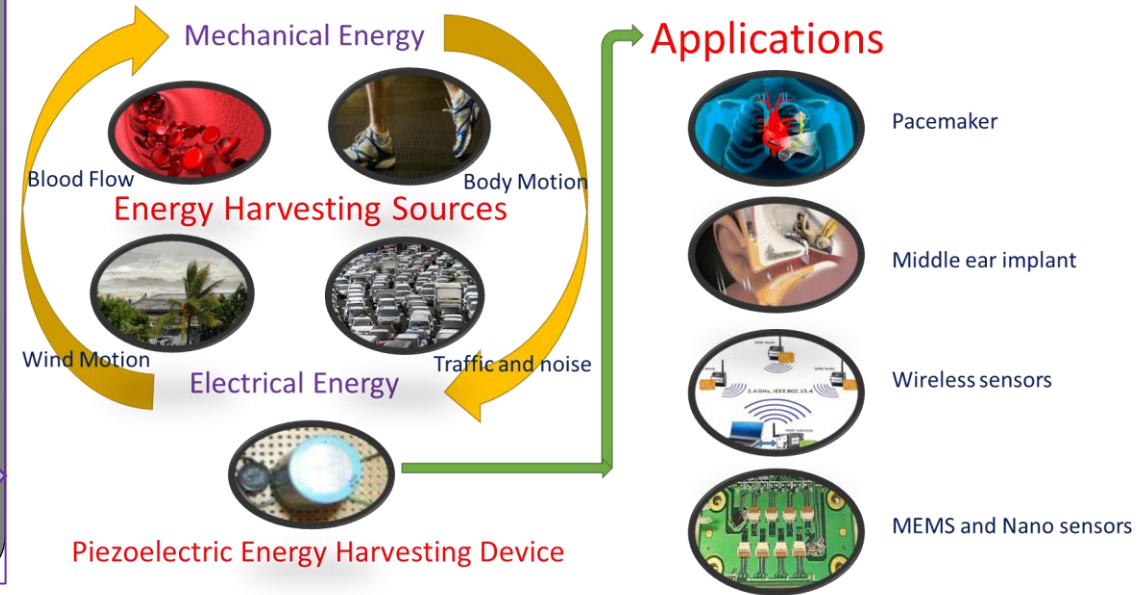
**Mayuri Srivastava**

**(2019SRZ8780)**

**M. Sc. (Chemistry)**

**M. Tech. (Plastics Technology)**

**Design and Development of Conducting Filler Loaded Piezoelectric Polymer Based Flexible Micro Device for Energy Harvesting**



In this present world, wherein the power requirements for electronic devices have been reduced, the energy harvesting is approaching an interesting technological stage and the efficiency of energy harvesting devices has been increased. Electronic devices with batteries has some inherent drawbacks like lower lifespan thus necessitating their periodic replacement. To overcome this present problem, the self-powered devices can be the unique solution to those shortcomings.

The present research focus on the development of a lightweight flexible piezoelectric energy harvesting device which would potentially address the present existing problems. The overall selection of the piezoelectric materials arranged in this way that it will impart higher and efficient transfer of mechanical energy to electrical energy as compared to the existing reported bulk energy harvesting devices. Thus it could be used to powering other electronic items which excludes the requirement heavy battery / external power supply.