

Power Generation through Footstep

Abstract:

- The Power Generation through Footstep project explores the concept of harnessing human kinetic energy from footsteps to generate electrical power.
- This innovative system utilizes piezoelectric transducers embedded in the floor to convert mechanical energy from footsteps into electrical energy, providing a sustainable and renewable source of power.
- The project involves the design and implementation of a prototype footstep energy harvesting system composed of piezoelectric sensors, conditioning circuits, and energy storage components.
- As individuals walk or move over the sensor-equipped floor, the mechanical pressure from each footstep generates voltage output from the piezoelectric material.
- The project aims to demonstrate the feasibility and effectiveness of footstep energy harvesting as a viable alternative energy source, particularly in environments with high pedestrian traffic.
- Potential applications include powering low-energy devices, lighting systems, or charging electronic devices using renewable energy generated from human movement.

