

IIT-I develops shoes with GPS, RFID for Armed forces

Indore: The Indian Institute of Technology (IIT), Indore has developed real-time tracking shoes equipped with embedded Radio Frequency Identification (RFID) and Global Positioning System (GPS) trackers for Armed forces to facilitate tracking of the location of military personnel.

These innovative shoes will harness the energy generated from each human step to power electronic devices such as GPS and RFID trackers. IIT-I has delivered 10 pairs of these 'Tribo-Electric Nanogenerator (TENG) based shoe sole energy harvesting' shoes to the Defence Research and Development Organization (DRDO).

Professor Suhas Joshi, director, IIT Indore, said, "The real-time location tracking capabilities enhance the safety and coordination of military personnel, greatly boosting operational efficiency and security. The TENG-powered shoes can effectively support essential GPS and RFID systems, providing a self-sustaining and dependable solution for a wide range of military needs."

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cient and portable power sources continues to rise, IIT Indore's groundbreaking innovations, including the TENG-based shoe sole technology and other advanced DRDO projects, are poised to revolutionise energy harvesting, real-time tracking, and various defence and industrial applications," said Joshi. The TENG-powered shoes can also be used to track the movement of Alzheimer's patients, school children, workforce in industries, and mountaineers.

The principal investigator of the team who developed the innovative shoe, Professor IA Palani, faculty at IIT Indore, said, "The TENG system in these shoes utilises advanced tribo-pairs, Fluorinated Ethylene Propylene (FEP) and Aluminium to generate power with each step." TNN