

IIT-I develops real-time tracking shoes for army

Will also harness energy from human motion to power devices

Our staff reporter

INDORE

In a groundbreaking development, Indian Institute of Technology Indore has successfully delivered 10 pairs of innovative Tribo-Electric Nanogenerator (TENG) based shoe sole energy harvesting units to the Defence Re-

search and Development Organization (DRDO) under the Ministry of Defence, Government of India.

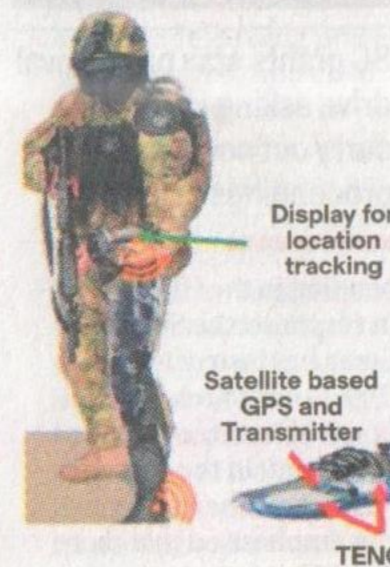
This milestone showcases a significant leap in integrating sustainable energy solutions with advanced tracking technologies. The shoes, developed under the expert guidance of Prof IA Palani, faculty member at IIT Indore, are designed to harness energy from human motion to power electronic devices.

IIT Indore director Prof

Industrial use too

Beyond military use, these TENG-powered shoes hold promise for civilian and industrial applications. For families having patients with Alzheimers the shoes offer peace of mind through reliable location tracking. Working parents can monitor their children's whereabouts throughout the school day. In industrial settings, the shoes are useful for attendance tracking and worker monitoring.

THE FUTURE SOLDIER



Suhas Joshi said "The military applications of this technology are noteworthy. The real-time location tracking capabilities enhance the safety and coordination of military personnel, boosting operational efficiency and security. The TENG-powered shoes can support essential GPS and RFID systems, providing a self-sustaining and dependable solution for various military needs.

"As the demand for efficient and portable power sources continues to rise, IIT

Indore's innovations, including the TENG-based shoe sole technology and other advanced DRDO projects, are set to revolutionize energy harvesting, real-time tracking, and various defence and industrial applications. These advancements offer sustainable and practical solutions for a wide range of needs, highlighting IIT Indore's pivotal role in pioneering the future of defence technology."

► Continued on | P6

Page - 01

IIT-I develops real-time...

Palani said, "The TENG system in these shoes utilizes advanced tribo-pairs, Fluorinated Ethylene Propylene (FEP) and Aluminium, to generate power with each step. This energy is stored in a central device within the shoe sole, ensuring a reliable power source for small-scale electronic circuits. Additionally, the shoes feature sophisticated tracking technology, including RFID with a 50-meter range and a satellite-based GPS module for precise live location tracking."

Contd. Page - 06