Departmental Seminar	
Seminar Title	: Comprehensive Modeling and Design of Low Cost Piezoelectric Based Ultrasound Wireless Power Transfer for Submersible Sensors.
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Venue	: EC303, Seminar Room
Date and Time	: 13 Mar 2025 (05.15PM)
Abstract	: This paper proposes a low-cost ultrasound (US) based wireless power transfer (WPT) link for powering lowpower electronics devices used in underwater conditions. The proposed US-WPT link comprises a pair of low-cost ultrasonic transducers, one as a transmitter (Tx) and the other one as a receiver (Rx), and a low-cost full bridge rectifier circuit using Schottky diodes. The paper extensively discussed the modeling of the ultrasound devices, focusing on the energy harvesting perspective and also on designing a low-cost efficient rectifier to generate DC power from ultrasound signal received at the piezoelectric-receiver module. It also may be noted that the developed US-WPT link is capable of

design of the US-WPT link is quite simple yet highly efficient for immersible sensor nodes.

generating power wirelessly as high as 3.7 mW in underwater conditions. Therefore, it can be claimed that the overall