
Departmental Seminar

Seminar Title	: A Blockchain-driven Decentralized Autonomous Organization for Battery Energy Storage Systems
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Venue	: Seminar Room (EE-205)
Date and Time	: 18 Sep 2025 (5:00PM)
Abstract	: This paper presents a blockchain-enabled decentralized autonomous organization (DAO) framework that leverages interconnected multilateral smart contracts to create revenue streams for decentralized token holders. The framework facilitates participation in energy arbitrage mechanisms using a battery energy storage system (BESS), enabling efficient and transparent value generation. In this framework, each token holder (shareholder) exercises their voting rights to manage the operation of the battery energy storage system (BESS) within the energy arbitrage mechanism. Decision-making is informed by historical electricity prices, forecasted prices, real-time market price, and the battery's current state of charge. Token holders collectively control the battery through a consensus-based decision-making algorithm, determining its operational mode (charge, discharge, or float). This process is seamlessly facilitated by smart contracts, ensuring transparency and efficiency.