TEXAS A&M UNIVERSITY
Department of Electrical & Computer Engineering

TRANSFORMING ENGINEERING EDUCATION

ENERGY & POWER GROUP SEMINAR

Weather-Informed Bio-Inspired Prediction Models for Short-Term and Mid-Term Load and Renewable Generation

Abstract

The increasing integration of renewable energy sources into power grids has introduced significant challenges in maintaining grid stability, mainly due to weather-induced variability in generation and load, and system dynamic changes over time. This research analyzes the relationship between weather conditions and grid dynamics, proposing a predictive model inspired by biological systems. The model demonstrates adaptability to evolving systems, accurately forecasts short-term and mid-term load and renewable generation based on weather patterns and historical data, and provides valuable insights into grid resilience, stability analyses, and extreme weather scenario evaluations.

Thomas Chen
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Friday, April 11
11:30 am
241 ZACH

Biography

Thomas Chen is an undergraduate student in electrical engineering at Texas A&M University, with minors in computer science and biomedical engineering.

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