



TEXAS A&M UNIVERSITY

Department of Electrical
& Computer Engineering

TRANSFORMING ENGINEERING EDUCATION

ENERGY & POWER GROUP SEMINAR

Composite Load Modeling in Power Systems

Abstract

Composite load modeling is fundamental to power system analysis, providing a more accurate and comprehensive representation of load behavior under different operating conditions. Unlike traditional static models, composite load models incorporate both static and dynamic components, including induction motor loads, power electronic loads, and constant impedance elements, to capture the complex interactions that occur in real-world power systems. These models are critical in assessing voltage stability, transient dynamics, and overall system performance, particularly during disturbances and system fluctuations. Accurate load modeling is essential for reliable grid operation, as it directly impacts the accuracy of stability studies, dynamic simulations, and contingency analysis. As power grids evolve with increasing penetration of renewable energy and advanced technologies, the role of composite load modeling becomes even more significant in ensuring the resilience and efficiency of modern power networks. weather scenario evaluations.



Ramon Hinojosa

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Electrical & Computer Engineering
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Friday, April 11

11:30 am

241 ZACH

Biography

Ramon Hinojosa is currently pursuing a Master's degree in Electrical Engineering at Texas A&M, specializing in power systems, under the guidance of Dr. Adam Birchfield. His research focuses on power system modeling and analysis, with particular interests in synthetic grid visualization and load modeling. Through his research, he aims to contribute to the advancement of power system reliability and efficiency in modern electric grids.

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