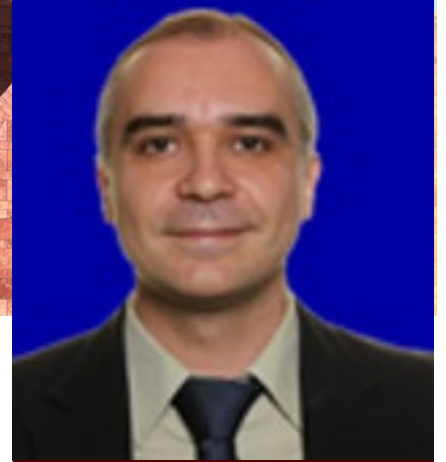




TEXAS A&M
UNIVERSITY at QATAR



MICROGRID

Josep M. Guerrero

1 September 2022, 2:30 p.m.

<https://tamu.zoom.us/j/98187956624>

ABSTRACT:

This talk will present the hierarchical control of AC and DC microgrids, including grid forming and grid following controllers, maximum power point tracking algorithms, grid connected and islanding operation, frequency and voltage droop controllers, stability analysis and power quality issues.

FOR MORE INFORMATION:

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Josep M. Guerrero (S'01-M'04-SM'08-FM'15) received the B.Sc. in telecommunications engineering, the M.Sc. in electronics engineering, and the Ph.D. in power electronics from the Technical University of Catalonia, Barcelona, and is working toward the M.Sc. in psychobiology and cognitive neuroscience at the Autonomous University of Barcelona. Since 2011, he has been a Full Professor with AAU Energy, Aalborg University, where he is responsible for the Microgrid Research Program. From 2019, he became a Villum Investigator by The Villum Fonden, which supports the Center for Research on Microgrids (CROM) at Aalborg University, being Prof. Guerrero the founder and Director of the same center. His research interests are oriented to different microgrid frameworks in applications like microgrid clusters, IoT-based and digital twins, cyber-security, maritime microgrids for electrical ships, vessels, ferries and seaports, space microgrids applied to nanosatellites and closed bioco-logical systems, and smart medical systems. Guerrero is Associate Editor for a number of IEEE TRANSACTIONS. He has published more than 800 journal papers in the fields of microgrids and renewable energy systems, which are cited more than 80,000 times. From 2014 to 2021, he was named by Clarivate Analytics a Highly Cited Researcher with 55 highly cited papers. In 2021, he received the IEEE Bimal Bose Award for Industrial Electronics Applications in Energy Systems for his pioneering contributions to renewable energy based microgrids. In 2022, he received the IEEE PES Douglas M. Staszkesky Distribution Automation Award, for contributions to making the hierarchical control of microgrid systems a practical reality.