

CHARLA 1: Partial Power Energy Processing – A New Toolbox for Efficient DC Microgrids



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 11:30 hrs.

 Auditorio B-221
Casa Central

SEMINARIO

Abstract

Interest in partial and differential power processing has grown in academia and industry, with applications in PV systems, battery storage, EV charging, and more. Despite numerous studies, practical challenges remain underexplored. This lecture critically reviews existing solutions, addressing protection, controllability, and real-world applications. Practical examples highlight benefits in dc microgrids, showcasing partial power converters as key tools for maximizing efficiency.

Biography

Andrii Chub (Senior Member, IEEE) received the B.Sc. and M.Sc. degrees in Electronic Systems from Chernihiv State Technological University, and the Ph.D. degree in Electrical Engineering from TalTech. He is currently a Senior Researcher with the Power Electronics Group at TalTech. His research interests include advanced dc-dc converter topologies, renewable energy systems, and the reliability of power electronics. He has co-authored over 200 publications and holds several patents. In 2024, he received the Estonian National Research Award and was included in Stanford's list of the top 2% most influential scientists.

