

Paper ID : 35-Spatial Power-Quality Distortion in Multi-Objective Planning of EV Charging Stations and Renewable Distributed Generation in Radial Distribution Systems

Mahmoud Elkholy — Short Biography

M. H. ELKHOLY received the B.Sc. and M.Sc. degrees in Electrical Power and Machines Engineering from Zagazig University, Egypt, in 2016 and 2019, respectively, and the Ph.D. degree in Integrated Intelligence Engineering from the University of the Ryukyus, Japan, in 2025. He also served as a Visiting Researcher at the University of the Ryukyus. He is currently a Postdoctoral Researcher at the Interdisciplinary Research Center for Smart Mobility and Logistics, King Fahd University of Petroleum and Minerals (KFUPM), Saudi Arabia, and an Assistant Professor at Zagazig University, Egypt.

His research focuses on the intelligent planning, operation, and resilience of next-generation power and energy systems, including renewable-rich smart grids, electric mobility and EV charging infrastructure, vehicle-to-grid integration, power quality, AI-driven energy management, multi-microgrid systems, peer-to-peer (P2P) energy trading, hydrogen and hybrid energy storage, and grid-interactive AI data centers.

Dr. Elkholy received the President's Honorary Award from the University of the Ryukyus for outstanding doctoral performance and the Zagazig University Award for International Publications in 2021, 2022, and 2023. He has published extensively in leading international journals and has served as Co-Principal Investigator in international research projects focusing on EV and renewable-energy integration, grid stability, green hydrogen, and smart cities.

