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Nota di contenuto	-- Artificial Intelligence in Electric Vehicles for Sustainable Driving -- Modernization of Electric Grids for Charging of Electric Vehicles -- Mitigating Impacts of Electric Vehicle Charging Stations to the Distribution Systems by Optimal Operation of Soft Open Point -- Performance Evaluation of Artificial Neural Networks for Electric Vehicle State of Charge Estimation across Different Driving Cycles -- GJO-Pattern Search Algorithm based DG and Capacitor Placement in Distribution Network with Zone based Installation of EVCSs, etc.
Sommario/riassunto	This book provides a comprehensive exploration of cutting-edge research in electric vehicles (EVs) integrated smart energy systems with a main focus on the application of artificial intelligence (AI). This book offers a wide and comprehensive practical approach with the applications of AI to address the challenges and opportunities of modern hybrid energy systems for developing advanced hybrid intelligent methodologies for forecasting and scheduling variable power output from renewable energy sources (RESs) and EVs. This will enhance system flexibility and facilitate the integration of RESs and EVs

efficiently, which is a step towards a sustainable future. The chapters cover diverse topics offering valuable knowledge and methodologies including an introduction to Artificial Intelligence (AI), Machine Learning (ML), Internet of Things (IoT), Cybersecurity, and their applications in modern power and energy systems, intelligent control of power electronics for RESs and EVs, intelligent charging management of EVs, etc. This book aims to provide insights into various suitable solutions to increase the security, reliability, and interoperability of the grid under high penetration of renewable energy, storage systems, and electric transport in the context of the modern smart grid. The multi-objective optimization problems such as economic and emission dispatch problems; flexibility and reliability problems; and economic and reliability problems are solved to determine the trade-off solutions using efficient evolutionary algorithms. The chapters cover diverse topics offering valuable knowledge and methodologies including an introduction to Artificial Intelligence (AI), Machine Learning (ML), IoT, Cybersecurity, and their applications in modern power and energy systems, intelligent control of power electronics for RESs and EVs, intelligent charging management of EVs, etc.