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Nota di contenuto	Part I: Electric, Hybrid and Fuel Cell Vehicles -- AC Machines: Permanent Magnet Synchronous and Induction Machines -- Batteries, Battery Management, and Battery Charging Technology -- Battery Technologies -- Electric, Hybrid, and Fuel Cell Vehicles, Introduction -- Electric, Hybrid Electric and Fuel cell Vehicles, Architectures of -- Energy Storage: Ultracapacitor -- Fuel-Cell-Powered Hybrid electric vehicle HEV Design and Control -- Hybrid Electric and Hydraulic Technology Applications in Off-Road Vehicles -- Hybrid Energy Storage Systems for Vehicle Applications -- Internal Combustion Engines, Alternative Fuels for -- PHEVs and BEVs in Coupled Power and Transportation Systems -- Plug-in Hybrid Electric Vehicles -- Regenerative Braking -- Sustainable Transportation -- Sustainable Vehicle Fuels, Well-to-Wheel Analysis -- Switched Reluctance Motor

Drives for Propulsion and Regenerative Braking in EV and HEV -- Vehicle Biofuels -- Vehicle Dynamics and Performance -- Vehicle Energy Storage: Batteries -- Vehicle Traction Motors -- Part II: Intelligent Vehicle Technology -- Unscented Kalman Filter in Intelligent Vehicles -- 3D Pose Estimation of Vehicles Using Stereo Camera -- Active Multifocal Vision System, Adaptive Control of -- Active Pedestrian Protection System, Scenario-Driven Search Method for -- Cooperative Group of Vehicles and Dangerous Situations, Recognition of -- Driver Assistance System, Biologically Inspired -- Driver Assistance Systems, Automatic Detection and Site Mapping -- Driver Behavior at Intersections -- Driver Characteristics Based on Driver Behavior -- Driver Inattention Monitoring System for Intelligent Vehicles -- Driving Under Reduced Visibility Conditions for Older Adults -- Dynamic Environment Sensing Using an Intelligent Vehicle -- Intelligent Vehicles Technology, Introduction -- Night Vision Pedestrian Warning in Intelligent Vehicles -- True Color Night Vision Video Systems in Intelligent Vehicles -- Vehicle Detection, Tightly Coupled LIDAR and Computer Vision Integration for -- Vehicular Ad Hoc Networks, Enhanced GPSR and Beacon-Assist Geographic Forwarding in -- Part III: Mass Transit Science and Technology -- Advanced Public Transport Systems, Simulation-Based Evaluation -- Bicycle Integration with Public Transport -- Bus Rapid Transit and Light Rail Transit Systems: State of Discussion -- Bus Rapid Transit, Institutional Issues Related to Implementation -- Bus Rapid Transit: Worldwide History of Development, Key Systems and Policy Issues -- Bus Versus Rail Implications for Transit-Oriented Development -- Bus Rapid Versus Light Rail Transit: Service Quality, Economic, Environmental, and Planning Aspects -- High Speed Rail, Technology Development of -- High-Occupancy Vehicle and Toll Lanes -- HOT Lanes/Value Pricing: Planning and Evaluation of Multiclass Service -- Light Rail Transit in the US and Abroad, Examination of History and Innovations -- Light Rail Transit, Shared Infrastructural Issues -- Light Rail Transit, Systemic Viability -- MAGLEV Technology Development -- Mass Transit Science and Technology, Introduction -- Personal Rapid Transit and Its Development -- Transit-Oriented Development and Land Use.

Sommario/riassunto

Innovative transportation technologies will be a vital component of any future sustainable society. Gathering over 50 authoritative, peer-reviewed entries from the Encyclopedia of Sustainability Science and Technology, Transportation Technologies for Sustainability covers a broad range of transportation-related sustainability research, from vehicle design and technology to mass transit systems. State-of-the-art chapters describe key developments in intelligent vehicle technology, including vision sensors, driver status monitoring, and vehicle motion control, while international experts present the latest research in electric, hybrid, and fuel cell vehicles. Leaders in the mass transit field assess a broad spectrum of alternatives in both small and large urban areas. This valuable collection is an essential reference for advanced undergraduate and graduate students, researchers, policymakers, and industry experts.