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Uploading and Dissemination in Real-time Vehicular Networks -- Part III Cooperative IoV: End-Edge-Cloud Cooperative Scheduling and Optimization -- Chapter 7. Convex Optimization on Vehicular End-Edge-Cloud Cooperative Task Offloading -- Chapter 8. An Approximation Algorithm for Joint Data Uploading and Task Offloading in IoV -- Chapter 9. Distributed Task Offloading and Workload Balancing in IoV -- Part IV. Intelligent IoV: Key Enabling Technologies in Vehicular Edge Intelligence -- Chapter 10. Toward Timely and Reliable DNN Inference in Vehicular Edge Intelligence -- Chapter 11. Deep Q-learning based Adaptive Multimedia Streaming in Vehicular Edge Intelligence -- Chapter 12. A Multi-agent Multi-objective Deep Reinforcement Learning Solution for Digital Twin in Vehicular Edge Intelligence -- Part V. Case Studies -- Chapter 13. See Through System -- Chapter 14. Non-Line-of-Sight Collision Warning System -- Chapter 15. Proactive Traffic Abnormity Warning System -- Chapter 16. UAV-assisted Pedestrian Detection System -- Chapter 17. Vehicular Indoor Localization and Tracking System -- Part VI. Conclusion and Future Directions -- Chapter 18. Conclusion -- Chapter 19. Future Directions.

Sommario/riassunto

This book offers a comprehensive introduction to technological advances in Internet of Vehicles (IoV), including vehicular communications, vehicular system architectures, data dissemination algorithms, resource allocation schemes, and AI-enabled applications. It focuses on the state-of-the-art IoV with regard to three major directions, namely networking, cooperation, and intelligence, including advanced wireless communication technologies, algorithm theory, optimization mechanisms, and AI technologies. In addition, the book includes a number of case studies with system prototype implementation and hands-on experiments in IoV, making it suitable both as a technical reference work for professionals and as a textbook for graduate students.