1. Record Nr. UNINA9910300148803321

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Titolo	An Introduction to Traffic Flow Theory [[electronic resource] /] / by Lily Elefteriadou
Pubbl/distr/stampa	New York, NY : , : Springer New York : , : Imprint : Springer, , 2014
ISBN	1-4614-8435-9
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (XX, 251 p. 97 illus., 79 illus. in color.) : online resource
Collana	Springer Optimization and Its Applications, , 1931-6828 ; ; 84
Disciplina	388.31
Soggetti	Mathematical optimization Civil engineering Optimization Civil Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Part 1 -- 1. Modeling the Motion of a Single Vehicle -- 2. Modeling Vehicle Interactions and the Movement of Groups of Vehicles -- Part 2 -- 3. The Traffic Stream: Traffic Flow Performance Characteristics -- 4. Capacity -- 5. Traffic Operational Performance Measures -- Part 3 -- 6. Analytical Models for Bottleneck and Queuing Evaluations -- 7. Simulation Modeling -- Part 4 -- 8. Freeways -- 9. Signalized Intersections and Networks -- 10. Unsignalized Intersections -- 11. Two-Lane Highways -- Appendix A -- Appendix B -- Index.
Sommario/riassunto	This text provides a comprehensive and concise treatment of the topic of traffic flow theory and includes several topics relevant to today’s highway transportation system. It provides the fundamental principles of traffic flow theory as well as applications of those principles for evaluating specific types of facilities (freeways, intersections, etc.). Newer concepts of Intelligent transportation systems (ITS) and their potential impact on traffic flow are discussed. State-of-the-art in traffic flow research and microscopic traffic analysis and traffic simulation have significantly advanced and are also discussed in this text. Real world examples and useful problem sets complement each chapter. This textbook is meant for use in advanced undergraduate/graduate level courses in traffic flow theory with

prerequisites including two semesters of calculus, statistics, and an introductory course in transportation. The text would also be of interest to transportation professionals as a refresher in traffic flow theory, or as a reference. Students and engineers of diverse backgrounds will find this text accessible and applicable to today's traffic issues.