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Soggetti	Transportation engineering Traffic engineering Control engineering Engineering geology Engineering—Geology Foundations Hydraulics Applied mathematics Engineering mathematics Quality control Reliability Industrial safety Fluid mechanics Transportation Technology and Traffic Engineering Control and Systems Theory Geoengineering, Foundations, Hydraulics Mathematical and Computational Engineering Quality Control, Reliability, Safety and Risk Engineering Fluid Dynamics
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Nota di contenuto	Intersection Control -- Warrants of Intersection Signalization -- Phasing and Sequencing -- Left Turns -- Pre-Timed Signal Timing --

Queuing at Intersections -- Level of Service of Signalized Intersections -- Controllers and Detectors -- Actuated Control -- Small-Area Detection -- Large-Area Detection -- High-Speed Approaches -- Preemption an Priority -- Traffic Signal Coordination.

Sommario/riassunto

This textbook introduces the basics principles of intersection signalization including need studies, signal phasing, sequencing, timing, as well as more advanced topics such as detectors, controllers, actuated control schemes, and signal coordination. The book covers a variety of topics critical to the set up and operation of intersections controlled by traffic signals. Professor Ni imparts a basic understanding of how intersections work, what justifies intersection signalization, how to properly design phasing and timing plans for intersections, what is needed to run traffic-responsive signals, the workings of traffic controller cabinets, and how to set up signal coordination at multiple intersections—competencies essential to transportation professionals in charge of traffic operation at federal, state, and local levels. Aimed at students in transportation engineering programs with a focus on intersection signalization, the book is also ideal for researchers of traffic dynamics and municipal civil and transportation engineers.