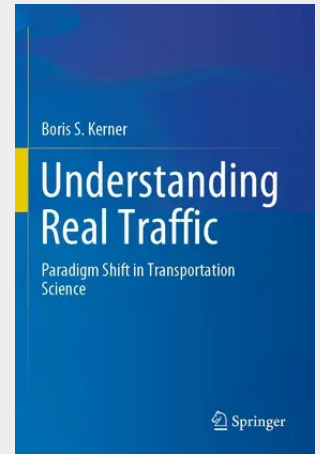


Understanding Real Traffic

Paradigm Shift in Transportation Science

This book addresses the reader interested in vehicular traffic phenomena, who have not learned about them before. It presents traffic phenomena like traffic breakdown and the emergence of moving traffic jams by showcasing empirical traffic data measured in real-world traffic. The author explains how these empirical traffic studies have led to the three-phase traffic theory and why this new theory is in conflict with standard traffic theories developed before. Moreover, he presents the reason for the failure of applications of standard traffic theories in real-world traffic and discusses why understanding real traffic has caused a paradigm shift in traffic and transportation science. The book examines why understanding real traffic breakdown is the basis for an explanation for the autonomous driving effects on traffic flow. It shows that understanding real traffic is possible from real-world traffic data without the need of mathematical traffic models. This makes the book intuitive for non-specialists, who can qualitatively understand all the basic features of traffic dynamics. In turn, experienced traffic researchers can grasp concepts and ideas made here easily accessible by the author, one of the leading pioneers in the field of vehicular traffic.

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