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   Soggetti   Pedestrian traffic flow - Mathematical models
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   Nota di contenuto   Frontmatter -- Preface -- Contents -- Acronyms -- 1. Introduction -- Part I. Fractional modeling of large crowds of pedestrians -- 2. Microscopic model of fractional order for evacuation of crowds -- 3. Macroscopic model of fractional order for crowds of pedestrians -- 4. Mesoscopic model of fractional order for crowds of pedestrians -- Part II: Fractional control of large crowds of pedestrians -- 5. Cluster consensus for crowds of pedestrians at micro-scale -- 6. Feedback control of crowds of pedestrians at macro-scale -- 7. Intelligent evacuation systems for crowds of pedestrians -- Index

   Sommario/riassunto   This book illustrates the application of fractional calculus in crowd dynamics via modeling and control groups of pedestrians. Decision-making processes, conservation laws of mass/momentum, and micro-macro models are employed to describe system dynamics while cooperative movements in micro scale, and fractional diffusion in macro scale are studied to control the group of pedestrians. Obtained work is included in the Intelligent Evacuation Systems that is used for

modeling and to control crowds of pedestrians. With practical issues considered, this book is of interests to mathematicians, physicists, and engineers.