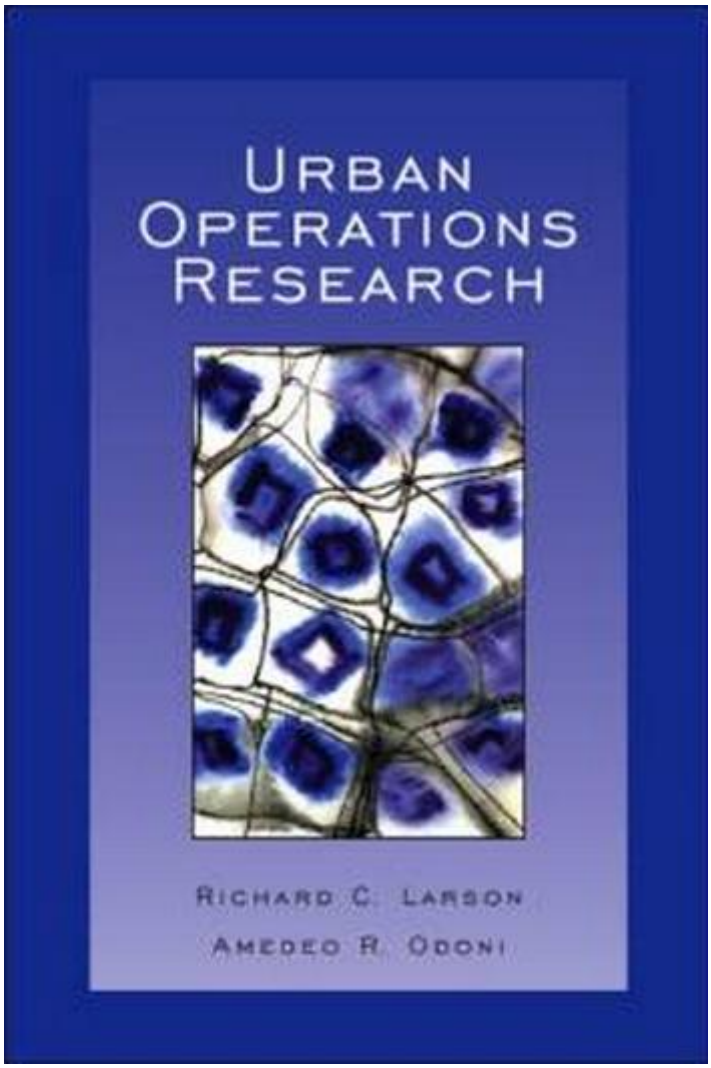
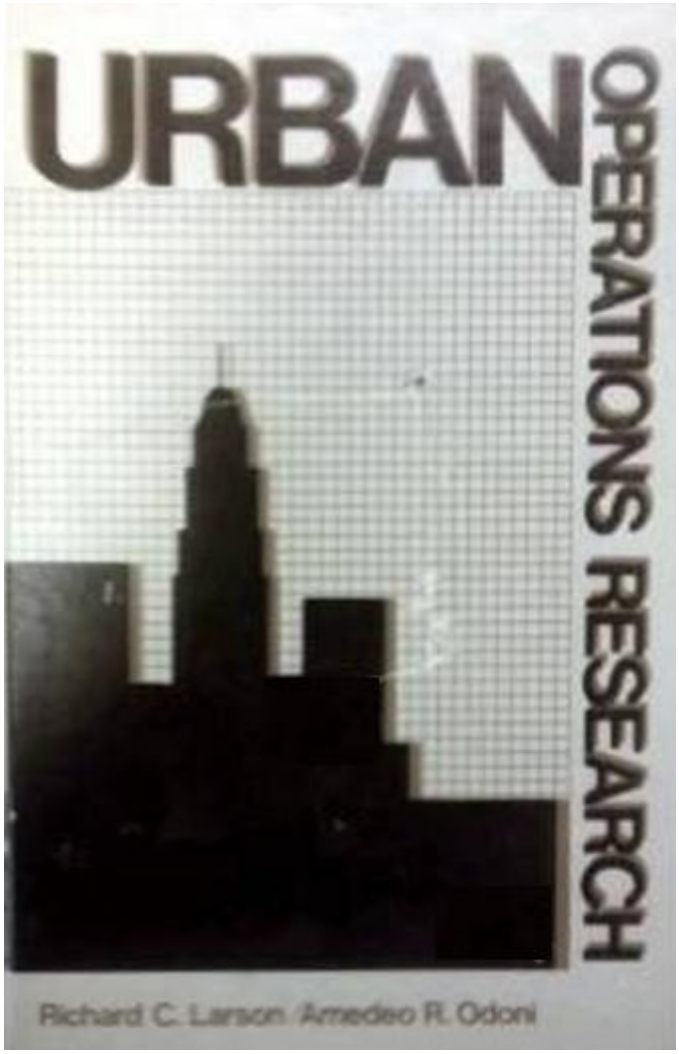


The book covers a wide variety of applied operations research in a way not seen elsewhere. With an emphasis on model building, not theorem proving, the book starts with a review applied probability and contains material on geometrical probability not easily accessible elsewhere. Spatial as well as temporal Poisson processes are covered in depth. Then the applied probability is put to good use in a chapter devoted to queueing models. This is a stand-alone introduction to queueing theory that may be useful in a variety of courses, just as the geometrical probability segment has stand-alone value. The next chapter is a unique tour of spatial queues, combining geometrical probability concepts with models of queues from previous chapters. The core of the chapter is development of the Hypercube Queueing model, a model that -- 31 years after its original development -- remains the gold standard in modeling municipal emergency services such as police, emergency medical and fire departments. The homework problems at the end of this chapter are the most challenging in the book, many worthy of the most advanced doctoral students. The book then shifts slightly from primarily probabilistic models to a combination of probabilistic and deterministic models, focusing on transportation networks analysis. This graph-focused chapter develops rigorous results by intuitive visual arguments, not abstract algebraic theorem proving. It too is a stand-alone chapter, the longest and most comprehensive in the book. There follows a brief chapter on the theory and mechanics of Monte Carlo simulation. This is good material even for people who use packaged simulation software, as it focuses on fundamentals and issues to think about even when using packaged software. The book concludes with a unique chapter on implementation,

based on the personal experiences of the authors and their students in attempting to implement the models, methods and philosophies of the book.



Versão Capa Dura