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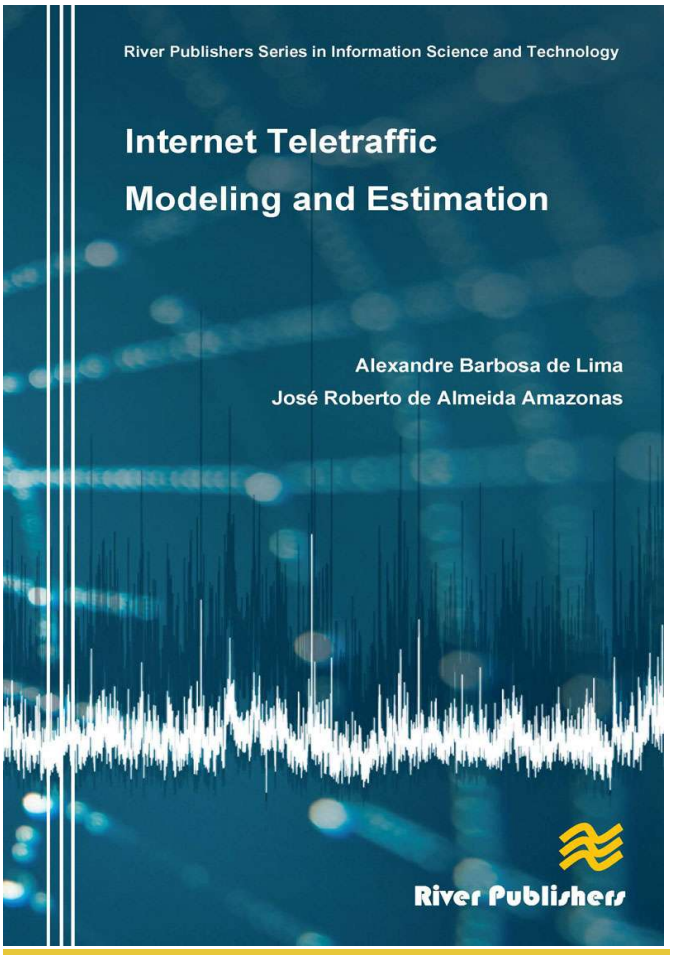
Internet Teletraffic Modeling and Estimation

Author: Alexandre Barbosa de Lima and José Roberto de Almeida Amazonas, Escola Politécnica of the University of São Paulo

Network traffic has fractal properties such as impulsiveness, selfsimilarity, and long-range dependence over several time scales, from milliseconds to minutes. These features have motivated the development of new traffic models and traffic control algorithms. This book presents a new statespace model for Internet traffic, which is based on a finite-dimensional representation of the Autoregressive Fractionally Integrated Moving Average (ARFIMA) random process. The modeling via Autoregressive (AR) processes is also investigated.

Content: Introduction, The Fractal Nature of Network Traffic, Modeling of Long- Range Dependent Teletraffic, State-Space Modeling, Modeling of Internet Traffic



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