



River Publishers Series in Computing and Information Science and Technology

## Internet Teletraffic Modeling and Estimation

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

**ISBN:** 9788792982100

**Available From:** February 2013

**Price:** € 90.00

### Description:

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



**Keywords:** forecast, long memory, long-range dependence, network traffic, prediction, self-similar

#### Denmark Head Office

Alsbjergvej 10  
9260 Gistrup  
Denmark  
[www.riverpublishers.com](http://www.riverpublishers.com)  
Email: [info@riverpublishers.com](mailto:info@riverpublishers.com)

#### USA Office

Indianapolis, IN  
USA  
Tel.: +1-3176899634  
Email: [rajeev.prasad@riverpublishers.com](mailto:rajeev.prasad@riverpublishers.com)

#### UK Office

River Publishers  
Email: [philippa.jefferies@riverpublishers.com](mailto:philippa.jefferies@riverpublishers.com)