

RUTGERS UNIVERSITY
DEPARTMENT OF STATISTICS AND BIOSTATISTICS
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Seminar

Speaker: George Michailidis, University of Michigan

Title: Dual Modality Network Tomography

Date: Wednesday December 3, 2008

Time: 3:20 PM

Place: 552 Hill Center

Abstract

In this talk, we discuss joint modeling mechanisms for packet volumes and byte volumes to perform computer network tomography, whose goal is to estimate characteristics of source-destination flows based on link measurements. Network tomography is a prototypical example of a linear inverse problem on graphs. We examine two generative models for the relation between packet and byte volumes, establish identifiability of their parameters and discuss different estimating procedures. The proposed estimators of the flow characteristics are evaluated using both simulated and emulated data. Finally, the proposed models allow us to estimate parameters of the packet size distribution, thus providing additional insights into the composition of network traffic.