



UC3M-ICMAT Seminar – 2014

Applied Probability and Statistics

Optimal Queue-Size Scaling in Switched Networks

Neil WALTON (Univ. of Amsterdam, The Netherlands)

Wednesday, February 26, 2014
11h00, ICMAT, Aula Gris I

We consider a switched (queueing) network in which there are constraints on which queues may be served simultaneously; such networks have been used to effectively model input-queued switches and wireless networks. The scheduling policy for such a network specifies which queues to serve at any point in time, based on the current state or past history of the system. In the main result of this paper, we provide a new class of online scheduling policies that achieve optimal average queue-size scaling for a class of switched networks including input-queued switches. In particular, it establishes the validity of a conjecture about optimal queue-size scaling for input-queued switches.

Instituto de Ciencias Matemáticas
Campus de Cantoblanco UAM
C/ Nicolás Cabrera 13-15
28049 Madrid, Spain
www.icmat.es