



KATHOLIEKE UNIVERSITEIT LEUVEN

Statistics Seminar

Joint organization by
ORSTAT, Faculty of Business and Economics and the Statistics Research Group,
Faculty of Science
Leuven Statistics Research Center

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Moment Properties of Multiserver Queueing Systems

**Thursday May 7, 2009
12:00—13:00**

Location: Room HOG 03,101, Naamsestraat 69, Leuven.
Supporting research project: GOA-project 2007/04

Abstract:

Multiserver queueing systems are often found in telecommunications, computing, manufacturing and other areas. In this seminar we will consider FIFO (First-in-first-out) GI/GI/s queueing systems. Heavy tailed service times are a common feature of these and other kinds of multiserver system.

We use moment properties to characterise the heaviness of probability distributions and present results that relate the moments of job waiting time to the moments of the job service time. These results depend on the load on the system. We show why this is the case using the concept of number of spare servers and other techniques. The seminar will also examine moment conditions for all components the workload vector (not just the smallest component, which is the waiting time) and bounds on mean waiting time.