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BOSTON UNIVERSITY STATISTICS
AND PROBABILITY SEMINAR SERIES

Estimating Unimpeded Flight Times:
A Statistical Aproach

Yorghos Tripodis

Department of Biostatistics

Boston University

Thursday, November 20, 2008, 4-5pm
Mathematics and Computer Science (MCS) Building, Room 149
111 Cummington Street, Boston

Tea and Cookies at 3:30pm in MCS 153

Abstract: Queuing models of the National Airspace System require demand information about when aircraft intend to land. Empirical data typically reflect when flights actually landed. Published schedules encapsulate delay expectations and actual landing times encapsulate actual delays, so neither is directly applicable. Instead, one might infer nominal arrival times from actual upstream departure times and unimpeded travel times. This paper presents a statistical aproach to estimate unimpeded flight times. The underlying idea is that the observed flight time is a mixture of two unobserved distributions - the unimpeded flight time and the delay. The statistical approach estimates these unobserved distributions, taking into account the seasonal periodicity of the data. The parameters of the model are estimated through an integrated EM algorithm and Kalman filter.

For directions and maps, please see *http://math.bu.edu/research/statistics/statseminar.html.*