



Hamilton Institute

Asymptotic Stability Region of Slotted Aloha

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Abstract:

Consider N queues with non-homogeneous packet arrivals. The queues share a common communication channel. At the beginning of each timeslot, if queue i has a packet, it attempts to access the channel with probability p_i . This attempt is successful when no other queue attempts to access the channel. For arbitrary N , the stability region of such queuing system is a long standing open problem. However as the number of queues N goes to infinity, it is possible to compute the asymptotic stability region.

This is a joint work with David McDonald (Ottawa) and Alexandre Proutiere (Microsoft).

Venue: Seminar Room, Hamilton Institute, Rye Hall,
NUI Maynooth

Time: 2.00 - 3.00pm (followed by tea/coffee)

Travel directions are available at www.hamilton.ie