Hamilton Institute

Cooperative Communication for Wireless Networks

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Abstract

Capacity of wireless networks is an extensively studied yet elusive problem lying at the intersect on of distinct fields of research. One of the key emerging techniques that enable this capacity analysis and leads to throughput enhancement is cooperative communication. This talk will identify and discuss two promising cooperative techniques for wireless communications: cooperative relaying and network coding.

In the first part of this talk, source and channel coding is combined to result in a much higher degree of node cooperation and thus a large gain in throughput in a distributed network. In the second part of the talk, a new distributed cooperativ coding strategy termed “network coding” is used in combination with a noisy channel model, where we find that gains beyond that envisioned by conventional coding strategies can be obtained.

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

Time: 1.00 - 2.00pm (followed by tea/coffee)

Travel directions are available at www.hamilton.ie

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