



Hamilton Institute

Large-scale urban vehicular networks: mobility and connectivity

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Abstract:

Vehicular networks are large-scale communication systems that exploit wireless technologies to interconnect moving cars. Vehicular networks are envisioned to provide drivers with real-time information on potential dangers, on road traffic conditions, and on travel times, thus improving road safety and traffic efficiency. Direct vehicle-to-vehicle communication is also foreseen to enable non-safety applications, such as pervasive urban sensing and fast data dissemination throughout metropolitan regions. The quantity and relevance of potential usages make pervasive inter-vehicular communication one of the highest-impact future applications of the wireless technology, which explains the growing interest of both industry and academy towards this research field. In this talk, we will address two intertwined topics in vehicular networks: the modeling of vehicular mobility in large-scale urban environments and the topological characterization of the vehicular network built on top of such a mobility. Both are fundamental - yet often oversought - aspects of vehicular networking, defining the strengths and weaknesses of the vehicle-to-vehicle communication system and dictating the rules for the design of dedicated protocols.

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

Time: 2.00pm - 3.00pm

Travel directions are available at www.hamilton.ie