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**Scoil na
Matamaitice agus na Staitisticí UCD**

An Coláiste Ollscoile, Baile Átha Cliath
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Analysis Seminar

R. Levene

will speak on

Non-commutative graph parameters and quantum channel capacities

Tue 10th October 2017 at 3:00PM

Location: UCD Science North 125

We generalise some graph parameters to non-commutative graphs (a.k.a. operator systems of matrices) and quantum channels. In particular, we introduce the quantum complexity of a non-commutative graph, generalising the minimum semidefinite rank. These parameters give upper bounds on the Shannon zero-error capacity of a quantum channel which can beat the best general upper bound in the literature, namely the quantum Lovász theta number. This is joint work with Vern Paulsen (Waterloo) and Ivan Todorov (Belfast).

This talk is part of the **Analysis** series. For more, see
<https://maths.ucd.ie/seminars>