



**UCD School of  
Mathematics and Statistics**

University College Dublin  
Belfield, Dublin 4, Ireland

Tel +353 1 716 2580  
Fax +353 1 716 1196

**Scoil na  
Matamaitice agus na Staitisticí UCD**

An Coláiste Ollscoile, Baile Átha Cliath  
Belfield, Baile Átha Cliath 4, Éire

Email [seminars@maths.ucd.ie](mailto:seminars@maths.ucd.ie)  
Web [maths.ucd.ie/seminars](https://maths.ucd.ie/seminars)

## Analysis Seminar

---

**Rupert Levene**

will speak on

**State conversion using von Neumann algebras**

**Tue 9th October 2018 at 4:00PM**

**Location: Seminar Room SCN 1.25**

Nielsen's theorem gives a simple characterisation of the pairs of pure finite-dimensional quantum states for which one may be converted to the other using 'local operations and classical communication'. We will give a mathematical introduction to this important result from quantum information theory, along with a new generalisation to an infinite-dimensional von Neumann algebraic context.

This is based on joint work with Jason Crann, David Kribs and Ivan Todorov.

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