Device-independent quantum information
By
Prof. Valerio Scarani, CQT, National University of Singapore

Date: 15 November 2012, Thursday
Time: 4.00pm to 5.00pm
Venue: Hilbert Space (SPMS-PAP-02-02)
Host: Assoc. Prof. David Wilkowski

Abstract

Bell's inequalities can be seen as a family of entanglement witnesses, with a very special property: they detect entanglement without need of prior knowledge on the nature of the system or the measurements. For this reason, they can be used for "device-independent" assessment.

In this talk, I shall review the main results in device-independent quantum cryptography, randomness generation and assessment of the quality of a source of entangled pairs (a.k.a. self-testing). Then I shall present in some detail some of our recent results in this field.

Short Biography