

# Departmental Colloquium

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Friday, February 8th, 2013  
1:00p.m., HH-3026

*Quantum information, free probability and random matrices*

## **Abstract:**

Random techniques have been used with great success in order to solve important problems in quantum information theory. In this talk I will describe two random matrix theoretic techniques (Weingarten calculus and operator norm estimates) that were initially developed in the context of free probability theory. Both techniques turn out to be very useful in order to study minimum output entropy of typical quantum channels.