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When Alice & Bob meet Banach

This talk aims at presenting some recent (fruitful!) uses of the so-called local theory of Banach spaces in quantum information theory. More specifically, I will explain how techniques and results from asymptotic geometric analysis may be employed to describe the “typical” properties of high-dimensional multipartite quantum systems (with a particular focus on their amount of entanglement). We will see some familiar random matrix models popping up, and the concentration of measure phenomenon will be ubiquitous. But (hopefully!) no special knowledge in any of these subjects will be needed to understand what I will be talking about.