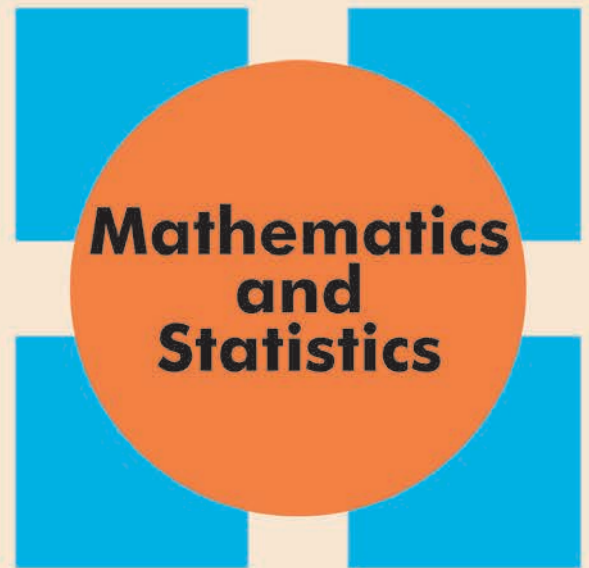


# COLLOQUIUM

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## Boundaries of some low-dimensional operator systems



Date: Friday, March 03, 2017

Time: 3:30 - 4:30 PM

Room: RI 209

**Abstract:** In classical analysis, a linear space of complex-valued continuous functions (on a compact Hausdorff space) admits two types of boundaries: the Choquet boundary and the Shilov boundary, and there is a very close relationship between the two. In modern analysis, we replace continuous complex-valued functions by Hilbert space operators; even so, the notions of Choquet and Shilov boundaries have meaning at this level, despite the noncommutativity of operator algebra. Determining these boundaries explicitly is often a delicate task. In this lecture, I will discuss joint work with Martin Argerami in which we determine the so-called boundary representations of certain 2- and 3-dimensional linear spaces of operators (called operator systems); in so doing, we draw upon the notion of noncommutative convexity known as  $C^*$ -convexity.