

**Speaker:** Ryan Causey (USC)

**Title:** Arbitrarily distortable Banach spaces of higher order (Joint work with Kevin Beanland and Pavlos Motakis)

**Abstract:** We introduce a transfinite ordinal index on the class of Banach spaces having Schauder bases to quantify the distortability of a given space. We discuss background on distortion, the Schreier families, and higher order  $\ell_1$  spreading models. We prove that a high order  $\ell_1$  spreading model implies a high distortion index and give examples of arbitrarily distortable Banach spaces with arbitrarily large, countable distortion index.