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Peter G. Casazza* (pete@math.missouri.edu), Department of Mathematics, University of Missouri, Columbia, MO 65211-4100. *The Kadison-Singer Problem in Mathematics and Engineering.*

We will see that the 1959 Kadison-Singer Problem in C^* -algebras is equivalent to fundamental unsolved problems in a dozen areas of research in pure mathematics, applied mathematics and engineering. This explains why each of these areas has volumes of literature on their respective problems without a satisfactory resolution as well as giving them common ground on which to interact. We will look at some of the equivalences of KS in operator theory, Banach space theory, harmonic analysis, and engineering. (Received July 17, 2006)