Directional Discrepancy

Craig Spencer
Kansas State University

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Abstract

How "uniformly" can we distribute n points in the unit square? How "irregular" must any such point distribution be? What if we wanted to work with the k-dimensional unit cube instead of the unit square? In this talk, we will come up with precise formulations of such questions, and we will discuss some applications of number theory and analysis to the study of irregularities of distribution.