THE DEPARTMENT OF MATHEMATICAL SCIENCES

Indiana University - Purdue University Fort Wayne

is pleased to present

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Covering, Separation, and Discrepancy for Random Points on the Sphere

Abstract

An algorithm based on point evaluations is regarded to be better if it can beat the average case that uses random points. We look into, in particular, three statistics: the "biggest holes" measured by the covering radius, the "closest distances" measured by the least distance, and the "irregularity" of a point set measured by the discrepancy with respect to a family of given test sets (geometric approach) or test functions (analytic approach). We present results regarding the distribution of holes and distances of random and selected deterministic point sets on the unit sphere of dimension ≥ 1.

Joint work with: Josef Dick, Ed Saff, Ian Sloan, Yuguang Wang, and Rob Womersley.

Noon – 1:00, Wednesday, May 27, 2015. Location: KT 216

`http://ipfw.edu/departments/coas/depts/math/news/seminars.html`