

Uniform design on general domain

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Abstract

Uniform design aims to scatter points as evenly as possible on certain domain. Although in real applications, the experimental domain is often quite arbitrary, the discrepancies frequently used to measure the uniformity of experimental designs are normally defined on unit cube. In this paper, we will introduce a unified framework to measure the uniformity of an experimental design on general domain. We will also give some examples to illustrate the construction of uniform design on some specific domains.