Tight Euclidean 5-designs in $\mathbb{R}^2$.

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Abstract

The classifications of tight Euclidean t-designs are interesting and difficult problems and far more delicate than tight spherical designs. The classifications of tight 2-designs are essentially done in Bannai-Bannai-Suprijanto (2007), and tight t-designs on two shells are very much studied. Here, we study the classification problem of small parameters, in particular, we investigate tight Euclidean 5-designs in $\mathbb{R}^2$.