

Abstract

Williamson matrices up to order 55

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(joint work with W. H. Holzmann and H. Kharaghani)

All non-equivalent Williamson matrices have previously been known for any odd order less than 41. We introduce a new algorithm for finding these matrices. The algorithm is used to determine all Williamson matrices up to order 55. It turns out that 47 is the first prime order for which there exist no Williamson matrices.