



Second SBU Combinatorics Day

Shahid Beheshti University, May 11, 2016

Honoring 50th anniversary of Behzad's Conjecture

Classification of Hadamard matrices of small orders

Behruz Tayfeh-Rezaie

All equivalence classes of Hadamard matrices of order at most 28 had been found by 1994. Order 32 is where a combinatorial explosion occurs on the number of Hadamard matrices. In 2014, using an exhaustive computer search we showed that there are exactly 13,710,027 Hadamard matrices of order 32. The next open case is order 36. Recently, we have tried to classify some types of Hadamard matrices of order 36. In this talk we present our approach and also report some partial results on the classification in order 36.