

## Genetic Algorithm to Construct and Enumerate 4×4 Pan-Magic Squares

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**Abstract :** Since 2700 B.C the problem of constructing magic squares attracts many researchers. Magic squares one of most difficult challenges for mathematicians. In this work, we describe how to construct and enumerate Pan- magic squares using genetic algorithm, using new chromosome encoding technique. The results were promising within reasonable time.

**Keywords :** genetic algorithm, magic square, pan-magic square, computational intelligence

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