

## Some New Designs with an Automorphism of Order Six

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In order to construct new block designs, we have implemented the ideas of developing the tactical decomposition matrices under the assumption of an automorphism of order six. This procedure, often called indexing, proved to be successful for many parameter triples. We shall introduce the key ideas of the method, as well as certain interesting details concerning our algorithm implementation. We shall present the first outputs of our algorithm : new block designs with automorphisms of order six for several parameter triples. As this work is still in progress, we hope to be able to extend the list of parameter triples for which we were able to construct new designs.