

Automated proofs of Turán densities using Razborov's flag algebra method

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Recently a number of results in extremal graph and hypergraph theory have been obtained using a semi-definite programming method, which forms a part of Razborov's flag algebra calculus. I will give an exposition of this method, and present some new results in extremal 3-graph theory obtained with it. This is joint work with Victor Falgas-Ravry.

Further details about the program *Flagmatic* can be found on the website <http://www.maths.qmul.ac.uk/~ev/flagmatic/>.