Extremal graph theory and flag algebra calculus

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Extremal graph theory ask questions such as how many edges can there be in a graph network if it contains no triangles Although there are many deep results in this area numerous tantalising conjectures remain open

Recently Razborov introduced a dramatic new tool to this eld the ag algebra calculus This has given rise to a huge amount of work some of it answering decades old questions that were previously out of reach

My three lectures will start by giving some background including a basic introduction to graph theory the main results in extremal graph theory and some simple applications to other areas of mathematics I wi