Preface

COMBINATORICS AND GRAPH THEORY

The impact of linear algebraic methods in many areas of combinatorial theory is very clear. The results obtained have been so remarkable that they have become classical almost overnight. Perhaps the most famous results of this kind are Fisher's inequality for balanced designs and the theorem of Hoffman and Singleton on Moore graphs. In this respect the powerful techniques of linear algebra may be likened to the use of character theory in the theory of finite groups. A few famous results have led to the development of a technique which has become inextricably linked with the main theory.

In combinatorics the link has provided the solution of many formidable questions, and has suggested fascinating new ones. In this special issue of *Linear Algebra and Its Applications* we have gathered together papers illustrating our theme in many diverse areas of combinatorics. We hope that this collection will give rise to new insights and new applications of algebraic methods.

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