equicoloration theorem has been shown by Hajnal and Szemeredi.

There are many other subjects covered in this volume and we shall not attempt to enumerate them here. The topics covered are generally discussed in depth. The book, though self-contained, would be difficult reading without some prior basic knowledge of Graph Theory. The pace is brisk and the reader is quickly brought to the frontiers of the subject.

Bollobás is a fastidious writer. The theorems are precisely stated and the proofs are carefully written. The publisher, Academic Press, has done a fine job. Most important, Bollobás is a mathematician who knows his material. In section after section he takes a set of theorems and, by appropriate concatenation plus some well chosen words of explanation, he creates a Theory.

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Multidimensional diffusion processes, by D. W. Stroock and S. R. S. Varadhan, Die Grundlehren der mathematischen Wissenschaften, vol. 233, Springer-Verlag, Berlin and New York, 1979, xii + 338 pp., $34.80.

1. *Is it best to think of a 'diffusion' as meaning* (i) *a continuous strong Markov process*, (ii) *a strong solution of an Itô stochastic differential equation, or* (iii) *a solution of a martingale problem*? Both the Markov-process approach and the Itô approach (which holds so special a place in the hearts of probabilists after the appearance of McKean's wonderful book [7]) have been immensely successful in diffusion theory. The Stroock-Varadhan book, developed from the historic 1969 papers by its authors, presents the martingale-problem approach as a more powerful–and, in certain regards, more intrinsic–means of studying the foundations of the subject.

The martingale-problem method has been applied with great success to other problems in Markov-process theory, both 'pure' (Stroock [**10**], . . .) and applied (Holley and Stroock [**3**], [**4**], . . .). It has conditioned our whole way of thinking about still-more-general processes (Jacod [**5**], . . .). Moreover, the method's ideas and results now feature largely in work on filtering and control (Davis [**1**], . . .).

I 'batter' you with the preceding paragraph because the authors make the uncompromising decision not 'to proselytize by intimidating the reader with myriad examples demonstrating the full scope of the techniques', but rather to persuade the reader 'with a careful treatment of just one problem to which they apply'. Halmos's doctrine 'More is less, and less is more' is thereby thoroughly tested; but if one had to choose a single totally-integrated piece of work which in depth and importance shows that probability theory has 'come of age', it would surely be the theorem towards which so much of this book is directed–or perhaps Stroock's extension of it [**10**]. Most of the main tools of stochastic-process theory are used, after first having been honed to a sharper edge than usual. But it is the formidable combination of probability theory with analysis (in the form of deep estimates from the theory of singular integrals) which is the core of the work.