The book is strongly recommended to all research workers interested in applications of probability theory; for specialists in queueing theory, it will become essential reading.                                                                                    J. GANI

EIDEL'MAN, S. D., *Parabolic Systems* (North-Holland, Wolters-Nordhoff, 1969), v + 469 pp., £7·60.

Since the appearance in 1938 of a fundamental paper by Petrovskii parabolic equations and systems have been subjected to a great deal of scrutiny—not least by the Russian school. This book, an English translation by Scripta Technica of the Russian original first published in 1964, is devoted exclusively to the study of parabolic systems (mostly linear or near linear) and embodies the sizeable contribution of the author to that study over the two decades prior to its publication.

Using classical analytic methods throughout, the author first directs himself to the construction and analysis of the fundamental matrices of solutions of parabolic systems then applies them to the study of the Cauchy problem and the initial-boundary-value problem. Fundamental matrices of solutions thus constitute a unifying theme. A very adequate résumé of the contents can be found in Friedman's review (MR 26 #4998) of the Russian original. Specific omissions are the theories of quasi-linear second order parabolic equations, an active field of research at the time of writing, and of systems strongly parabolic in the sense of Vishik, where functional analytic techniques are appropriate.

This book in translation, although by now somewhat dated, must be a welcome addition to the very small number of specialized texts in English on this particular topic. Of major appeal is the fact that it gives, for English readers, ready access to the large corpus of Russian research on parabolic systems up to the beginning of the last decade. A good seventy-five per cent of the extensive bibliography refers to the Russian literature, for example.

Finally the translation and presentation appear adequate except for the rather annoying omission of an index.                                                                    D. DESBROW

ROGERS, C. A., *Hausdorff Measures* (Cambridge University Press, 1970), viii + 179 pp., £3·80.

The purpose of this book is to give an account of some of the research done on Hausdorff measures. Since the initial work by Hausdorff in 1919, this subject has been developing steadily, mainly as a result of the research work of Besicovitch and his students. The first chapter contains a systematic account of measures and their regularity properties in abstract spaces, topological spaces and metric spaces. (The author uses the terms " measure " instead of " outer measure " and " countably additive measure " for " measure ".) Lebesgue measure in $n$-dimensional Euclidean space is discussed. There are also sections on metric measures on topological spaces, and the Souslin operation. In Chapter 2, various definitions of Hausdorff measure are given and their equivalence proved. Special Hausdorff measures arising in the theory of surface areas are discussed. There are sections on existence theorems, comparison theorems, Souslin sets, sets of non $\sigma$-finite measure, and the increasing sets lemma. §7 of this chapter contains some recent joint work of the author and Dr. R. O. Davies on the existence of comparable net measures and their properties, not previously published elsewhere. The final chapter contains a survey of the literature on applications of Hausdorff measures together with specific applications to ($a$) the theory of sets of real numbers defined in terms of their expansions in continued fractions and ($b$) the study of non-decreasing continuous functions on [0, 1]. There is also an