

GENERATION OF OPTIMAL SEQUENCES

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PREFACE

The thesis is based on some of the results of independent researches carried out by the author in the Indian Institute of Technology, Delhi, over the period of 1968-1971. As the title indicates, the basic aim of this study has been to develop algorithms for generating random aperiodic sequences which are nearly optimal according to chosen performance criteria. Two essentially different techniques are presented. The first one is a non-analytical computer search method which is suitable for generating binary sequences. The other method is analytical based on the calculus of variations and is suitable for generation of many sequences. The sequences concerned have application in radar and feedback communication system respectively and as such are hopefully of many practical utility.

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