fonctions mesurables sont cependant remplacées par les fonctions boréliennes. La présentation de la formule de Stoke dépasse nettement le traitement imprécis basé sur l'intuition géométrique. Cependant, là encore, la question est difficile et l'auteur se limite à définir correctement tous les concepts utilisés (sous-variété de R^n, orientation, formes différentielles, etc. . . .) et, en général, à énoncer les propositions qui conduisent à la démonstration de la formule et à lui donner un sens précis.

Du point de vue pédagogique, ce cours présente des caractéristiques remarquables. On observe un souci constant de donner au texte beaucoup d'unité et de généralité, tout en voulant faciliter le passage du niveau secondaire au niveau universitaire. Chacun des cinquante-cinq chapitres est coiffé d'un paragraphe de nature pédagogique qui situe le sujet traité dans le cadre du cours et dans le cadre de la science mathématique elle-même. Ces remarques corrigent dans une bonne mesure le style formel et abstrait du texte. On peut déplorer le manque d'exemples et d'exercices, mais on annonce dans le Tome I un "recueil d'exercices et de problèmes spécialement conçu pour accompagner le texte". Un découpage du texte en sections très courtes, parfois une ou deux lignes, facilite les références. Outre une table des matières, on trouve dans chacun des tomes, un bon index terminologique et un index des symboles.

En résumé, voilà, pour les premières années d'université, un manuel en deux tomes, écrit par un représentant éminent de la mathématique française.

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Probability Measures on Metric Spaces. By K. R. Parthasarathy. Academic Press, New York and London (1967). x+276 pp.

From the appearance of Yu. V. Prohorov's fundamental paper "convergence of random processes and limit theorems in the theory of probability" in 1956 much of the theory of stochastic processes has been regarded as the theory of probability measures on metric spaces.

The present book deals with the theory of probability measures in abstract metric space, complete metric groups, Hilbert spaces, spaces of continuous functions, etc. A survey of the contents of this book will clarify its scope:

Chapter I: The Borel subsets of a metric space. The Borel σ-field of a metric space is studied in detail. The basic isomorphism theorem which states that if A, B are Borel subsets of complete separable metric space X, Y and if A, B have the same cardinality then there is a one to one bimeasurable map from A onto B is proved. Furthermore Kuratowski's theorem which asserts that if φ is a one-to-one measurable map from a Borel subset A of a complete separable metric (c.s.m.) space onto a Borel subset B of another space then φ^{-1} is also measurable, i.e. φ is an isomorphism.

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In Chapter II properties such as regularity tightness and perfectness of measures are defined and studied. Connections between measures and linear functionals and the weak convergence of measures are studied. Prohorov's theorems on compactness and metrizability of a set of measures are proved. Existence of nonatomic measures in separable metric spaces is investigated. The interesting theorem of the author, Ranga Rao, and Varadarajan which asserts that any uncountable complete separable metric X space admits a nonatomic measure is proved. Its proof is beautiful.

In Chapters III and IV probability distributions in topological groups are studied in detail. A beautiful elementary proof due to the author, of the fact that any idempotent measure on a separable complete metric group is necessarily the Haar measure on a compact subgroup, is given. Representations of infinitely divisible measures in locally compact abelian groups and the connected limit theorems are brought.

Most of the results of these chapters are taken from the fundamental paper of the author, Ranga Rao, and V. S. Varadarajan, *Probability distributions on locally compact abelian groups*, Ill. J. Math **7** (1963), 337–369. The reader will, though, have to fill out quite a few details for himself in these chapters.

Chapter V entitled the Kolmogorov Consistency Theorem and Conditional Probability contains the proofs of the by now classical extension theorems and the existence of conditional and regular conditional probability in standard Borel spaces.

Chapters VI and VII deal with probability measures in a Hilbert space, in $C[0, 1]$ and in $D[0, 1]$ (functions possessing right and left limits at every point in $[0, 1]$. Limit theorems in Hilbert space, weakly compact sets of measures on Hilbert spaces (Prohorov theorems), Varadan's results on the Levy Khinchine representation of infinitely divisible laws, etc., are proved.

Probability measures on $C[01]$ and $D[01]$ are studied. The Skorohod topology in $D[01]$ and its properties are proved. Compactness criteria for sets of probability measures and some applications to testing statistical hypotheses are given.

The book is self-contained and elegantly written. It is recommended reading for any graduate student or worker in the field of probability.

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Modern Factor Analysis. BY HARRY H. HARMAN. (2nd ed., revised.) The University of Chicago Press, Chicago and London (1967). xx+474 pp.

The material is presented in five parts. Part 1 introduces factor analysis model, matrix and geometric concepts essential to Factor Analysis, problem of communality and different types of factor solutions. Part 2 gives direct solutions such