# Die Grundlehren der mathematischen Wissenschaften

in Einzeldarstellungen
mit besonderer Berücksichtigung
der Anwendungsgebiete

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# Introduction
# to Mathematical Statistics

Translated from the German
by Kenneth Wickwire

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With 11 figures

# Preface

I have used the opportunity of the second edition of the
German version being translated into English to alter and
improve some details. Of course I tried to correct
misprints and errata of the original version. Moreover some
proofs have been slightly changed and I hope thereby
improved. In many instances more recent results have
been inserted in the text, for example the treatment of the
infinite dimensional linear programms in the third chapter
and the investigation of superefficiency in the 5th Chapter.
On the whole I enlarged the references by pointing to more
recent papers. In doing so I have considered the literature
up to 1971. The 7th chapter is left unchanged although
there has been particular progress in developing the theory
of non-parametric statistical inference: Analysis and Prob-
ability theory as treated in the Introduction and in the
first chapter would have been an insufficient background
for this study. At least the concept of the contiguity of
measures would have had to be introduced. Moreover the
excellent book by J. Hájek and J. Šidak, "Theory of Rank
Tests" has in the meantime been published.

I am greatly indebted to Mr. Wickwire who translated
almost the entire original text into English.—Mr. Wickwire
has succeeded in rendering an almost literal translation of
often linguistically difficult German structures. Let me then
heartly thank my colleague Professor Pfanzagl, University
of Cologne, who read the entire English manuscript and
gave me several important hints. Dr. Sendler, University
of Dortmund, accepted the cumbersome task of reading
the galley proofs. Many improvements are due to his
efforts. Mess. Grossmann and Pflug, University of Vienna
assisted in the compilation of the voluminuous references.
I should also like to express my gratitude to Professor

Eckmann and Professor van der Waerden for their decision
to incorporate this translated version in the "Grundlehren".
In 1973 I spent several months at Bowling Green State
University during which time I was able to read and correct
a large portion of the page proofs. I should like to express
my appreciation to Bowling Green University and in
particular to Professor E. Lukacs.

Last but not least I owe many thanks to Springer-Verlag.
Not only did they overcome all difficulties which arose in
connection with the translation but they also always
respected all my wishes.

I hope very much that the English version will be
accepted as kindly as the German was.

Vienna, in Summer 1974

L. Schmetterer

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