

# Preface

This book is an entirely revised, in some parts considerably shortened, in other parts enlarged, version of a study which was originally published in German with the title “Die verschiedenen Formen und Funktionen des zentralen Grenzwertsatzes in der Entwicklung von der klassischen zur modernen Wahrscheinlichkeitsrechnung” at Shaker Verlag (Aachen, Germany) in 2000. I thank Shaker for giving me the permission to republish large parts of that work in an English translation. This mainly concerns chapters 1, 3, 4, and 5 of the present book. Most parts of this book have been translated from German or directly written in English by the author himself, except for chapters 1 and 8, as well as the first part of chapter 5 up to section 5.1.2 inclusively, section 6.1, and section 7.2, which were translated by Gavin Bruce from the author’s German drafts. Brent Runyan and Andreas Ellwanger corrected those portions of text which are less mathematical.

During the long time of preparing the original and thereafter the present version of the book, many people gave me assistance and advice. As representative of all the persons who considerably helped me with the 2000 book, I thank Ivo Schneider in the first place for his comprehensive and continuous support. Ulrich Oppel kindly gave many valuable hints about mathematical details. The idea to publish an English version was primarily inspired by Reinhard Siegmund-Schultze, and I thank him very much for his encouragement. Bo Isenberg drew my attention to the characterization of modernity through the notion of contingency and introduced me to this subject. I am very grateful to Walter Purkert for discussing questions concerning Hausdorff’s reception of Lyapunov’s work with me. Günther Wirsching helped me with his friendly and continued interest in the progress of this book, and with numerous discussions on stochastic and historical issues. René Grothmann carefully reworked the pictures and graphics enclosed in this book. Vladimir Andrievskii provided me with copies of sources that were very difficult to access. Without Fritz Heberlein’s and Peter Zimmermann’s professional aid I would not have overcome the frequent  $\text{\LaTeX}$  problems which occurred during the making of this book. Finally, I thank Jesper Lützen for accepting my book in the Springer series *Sources and Studies*.

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I consider it a favorable coincidence that this book appears 200 years after the first publication of Laplace’s approximation of the distributions of sums of large numbers of independent random variables by normal distributions, which can be interpreted as a first fairly general central limit theorem. This achievement decisively influenced the course of history of probability theory up to modern times. Therefore, this book is also intended to serve as a modest contribution to the 200th anniversary of one of Laplace’s most outstanding findings.

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