Pravděpodobnost (Probability): Critical Review

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The book deals with the probability theory up to limit theorem and enables the reader to learn the subject in Czech language. It offers a complete, carefully structured and continuous explanation which enables the reader to follow the process of building the above mechanism from the basis up to complex problems of probability convergences in limit theorems. The book can be easily studied by anyone who mastered basics of university mathematics and has especially active knowledge of matrix algebra and differential and integral calculus. The selected access can make the study of theoretically difficult methods easier to those who are lacking more profound mathematical basis.

The text is structured into seven parts which clearly and consistently divide the subjects into consecutive units and the explanation then proceeds from the probability definition up to limit theorems. In the first part the concept of random trial is discussed in detail and possible definitions of probabilities are given. The author deals with properties of probability, examines carefully the independence of events and related definition of conditional probability. The following two chapters are devoted to random variables and random vectors, their distribution and numerical characteristics. These problems are followed by examining transformations of random variables (and vectors) which are very useful and are covered in chapter four. In the following two chapters the readers may find a review of most commonly used discrete and continuous distributions of random variables and two multivariate distributions (multinominal distribution and multivariate normal distribution). The review of random variable contains also sample distributions used for inductive inference in mathematical statistics. The last chapter regarding limit theorems introduced convergences in probability and in distribution and deals with the formulation and use of selected laws of large numbers and central limit theorems.

The scope of information in the book will enable the reader to use with comprehension the probability models or to follow statistical literature. The monograph can be recommended both to those who just begin with the study of the subject and to the users of statistical methods wishing to complete their

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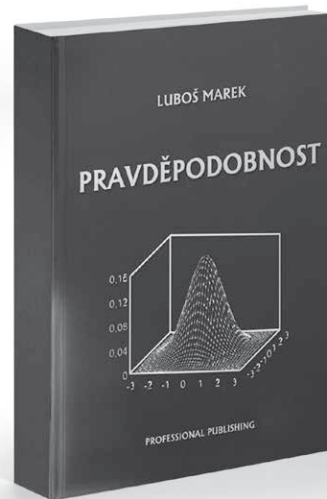
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fundamental knowledge on which these methods are based. The book will help such reader to study the literature and to use the methods of mathematical statistics with better comprehension. The book may also serve as valuable study aid for students who study the subject at the university in bachelor's or master's programmes. It seems to me that the book can be successfully used as a reference source of information which the users of probability and mathematical statistics need constantly.

The book offers every knowledge and information necessary for mastering the subject, unfortunately, the intention which the author wished to follow suggests that the reader does not have a chance to test his/her knowledge and comprehension of explanation on examples or problems for which they may seek solution independently. The reader of this type of monograph would definitely appreciate more detailed bibliography which would make further study of this extensive subject easier.

Taking into account the above we may conclude that the monograph can be recommended to anyone who mastered at least fundamental knowledge of university mathematics and wishes to properly learn classical theory of probability.