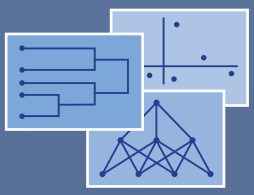
Studies in Classification, Data Analysis, and Knowledge Organization

Simona Balzano · Giovanni C. Porzio · Renato Salvatore · Domenico Vistocco · Maurizio Vichi *Editors*

Statistical Learning and Modeling in Data Analysis

Methods and Applications



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Preface

This book offers a collection of papers focusing on methods for statistical learning and modeling in data analysis. A series of interesting applications are offered as well. Several research topics are covered, ranging from statistical inference and modeling to clustering and factorial methods, from directional data analysis to time series analysis and small area estimation. Applications deal with new analyses within a variety of fields of interest: medicine, finance, engineering, marketing, cyber risk, to cite a few.

The book arises as post-proceedings of the 12th meeting of the CLAssification and Data Analysis Group (CLADAG) of the Italian Statistical Society (SIS), held in Cassino (IT), on September 11–13, 2019. The first CLADAG meeting was held in 1997, in Pescara (IT). CLADAG is also a member of the International Federation of Classification Societies (IFCS), founded in 1985. CLADAG promotes advanced methodological research in multivariate statistics with a special vocation towards Data Analysis and Classification. It supports the interchange of ideas in these fields of research, including the dissemination of concepts, numerical methods, algorithms, computational and applied results. This book is thus in line with the main CLADAG goals.

Thanks to the participation of renowned speakers, coming from 28 different countries, the scientific program of the CLADAG 2019 Conference was particularly engaging. It saw 5 Keynote Lectures, 32 Invited Sessions, 16 Contributed Sessions, a Round Table, and a Data Competition. The richness of the Conference program, and hence of this book, is definitely due to the Conference Scientific Committee and particularly to its Chair Francesca Greselin. We are indebted to their work. We are also indebted to the anonymous referees. They did a great job and helped us to improve the overall quality of this book.

Our gratitude also goes to the staff of the Department of Economics and Law, University of Cassino and Southern Lazio, who supported the conference and contributed to its success. A special thank goes to Livia Iannucci, who worked side by side with the Local Organizing Committee offering her precious administrative support before, during, and after the conference.

Above all, we are thankful to all the participants and to those who, among them, have chosen this book to share their research findings. Our wish is that this book will contribute to foster the creation of new knowledge in the field.

Cassino, Italy
26 November 2020

Simona Balzano
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Renato Salvatore
Domenico Vistocco
Maurizio Vichi

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