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Preface

The COVID-19 pandemic is putting our society under incredible health, emotional, and economic stress. Facing its harmful effects and their uncertainty, the Executive Board of the Italian Statistical Society (SIS) and the Local Organizing Committee, to ensure the highest level of safety for members and delegates, deliberated to cancel the 50th Meeting of the Italian Statistical Society originally planned to be held in Pisa in June 2020 and to postpone the conference to June 2021. The Executive Board and the Local Organizing Committee continue to monitor closely the pandemic evolving situation, and keep the members of SIS and the researchers informed about the potential new dates for the next meeting. To give value to the work of those who prepared their presentation for the conference, the Program Committee decided to publish the volume *Book of short papers - SIS 2020* despite the conference cancellation.

The conference program included 4 plenary sessions, 16 specialized sessions, 24 solicited sessions, 32 contributed sessions and the poster exhibition. Plenary sessions concerned with robust statistics, human longevity, statistical models for climate changes and small area estimation for educational poverty. The meeting had to host also 2 round tables on data privacy and innovation in statistics. Activities focused on topics of interest for a wider audience included two round tables on Teaching Statistics and on the SIS journal Statistical Methods & Applications, and the Stats Under the Stars (SUS6) competition for young statisticians. The SUS6 event attracted many sponsors from statistical, financial and editorial firms as well as numerous students. The conference committee had registered 345 accepted submissions, including 143 to be presented in invited plenary, specialized and solicited sessions, and 202 spontaneously submitted for oral and poster sessions.

This book includes most of the scientific contributions that had to be presented at the 50th Meeting of the Italian Statistical Society. It is organized into 49 chapters corresponding to 15 specialized, 23 solicited sessions, and to 11 general topics for contributed papers and posters. All 268 contributions provide a wide overview of the state-of-the-art of the subjects, from methodological and theoretical contributions, to applied works and case studies. The result is a very lively picture of the Italian statistical community with its international connections.

We would like to thank all contributors for having submitted their work to the conference, the members of the Program Committee and the extra reviewers for their efforts in this difficult period. Although the Conference did not take place, the organization went on until cancellation was decided for safety reasons. It would have been impossible without the joint effort of Università di Pisa, Scuola Superiore Sant'Anna and National Research Council of Pisa. Members these three institutions took part actively in the Local Organizing Committee. Finally we wish to express our gratitude to the publisher Pearson Italia for all the support received.

This book is our contribution to encourage the scientific community and the network of the Italian Statistical Society to go on and transform this difficult period into an opportunity of scientific debate for better statistics in a better world.

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