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Advances in Statistics**

This book series publishes volumes of peer-reviewed short papers presented at the scientific events such as conferences, seminars and workshops organized by the Italian Statistical Society (SIS) and its sections.

The Italian Statistical Society (Società Italiana di Statistica, SIS) was established in 1939 and ranks among the institutions of particular scientific relevance. SIS aims to promote scientific activities for the development of statistical sciences and carries out this task organizing scientific meetings and conferences, and by means of publications and partnerships at a national and international level.

Alessio Pollice · Paolo Mariani  
Editors

# Methodological and Applied Statistics and Demography II

SIS 2024, Short Papers, Solicited Sessions

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# Preface

The promotion of scientific activities for the advancement of statistical sciences represents the defining element of the Italian Statistical Society's (SIS) actions. Since its inception, the Society has grown in tandem with the rapid dissemination of quantitative methods for data analysis across various fields of scientific research and social life. Academics, researchers, doctoral students, and professionals interested in statistical and demographic research, as well as related methodological and applied fields, have shared their activities during the 52nd Scientific Meeting of the Italian Statistical Society held at the University of Bari Aldo Moro from June 17th to June 20th, 2024.

The biennial conference is a traditional event that promotes interactions among national and international researchers in Statistics, Demography, and applied Statistics in Italy. The objective of the conference is to bring together national and foreign researchers and professionals to discuss recent developments in theoretical and applied Statistics, as well as Demography and Statistics for the social sciences. The event featured over 450 presentations, including 7 keynotes in the 5 plenary sessions, 66 contributions in the 22 specialized sessions, 144 contributions in the 36 invited sessions, and 236 presentations in the 48 sessions of spontaneous communications, all addressing specific themes of methodological and/or applied Statistics and Demography. The high number of contributions and the significant participation in the conference demonstrate the desire to participate in scientific events as venues for exchange and discussion on the new developments in our field, a vibrant characteristic of our scientific community.

Round tables and meetings on topics of general interest such as “Data science: statistics for the 22nd century” and “Policy tools for innovation and development” were also organized, along with satellite events such as the 7th edition of the hackathon “Stats Under the Stars”.

We would also like to thank the European Network for Business and Industrial Statistics (ENBIS) and the Institute of Mathematical Statistics (IMS) for their presence. Special thanks go to the Program and Organizing Committees for their tremendous effort, to the University of Bari Aldo Moro for endorsing and supporting the event, and to all the sponsors for their contributions: Società Italiana di Statistica, Università degli Studi di Bari Aldo Moro, Banca Popolare di Puglia e Basilicata, Fondazione Puglia, Ladisa Ristorazione S.R.L., and Unioncamere Puglia.

The high number of contributions has led to the production of four volumes based on the types of sessions outlined in the scientific program. The first volume includes the Plenary and Specialized sessions, the second volume includes the Solicited sessions, and the third and fourth volumes include the Contributed sessions. These volumes contain works, as usual subjected to peer review, that the authors have agreed to publish, providing a comprehensive overview of statistical research in recent years.

This second volume presents a selection of contributions from authors who delivered invited presentations during the Solicited sessions.

June 2024

Alessio Pollice  
Paolo Mariani

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