GUEST EDITORIAL PREFACE

Special Issue on Biostatistics and Computational Mathematics for Life Sciences Research

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Mathematics is an essential component of the increasingly interdisciplinary modern scientific research. Computational Mathematics combines core studies in mathematics, computer sciences and their applications in several other scientific disciplines, including biology and medicine.

Statistics for Life Sciences presents the key concepts of statistics as applied to life sciences, while incorporating tools and themes of modern data analysis. Statistics for Life Sciences emphasizes the link between statistics and the scientific method; it provides an overview of the types of studies encountered in science including surveys, observational studies, and experiments; and it teaches the tools necessary for analyzing data from most one- and two-variable contexts. This issue will be an introduction to the basic principles and methods of biostatistics designed specifically for life sciences students who wish to learn modern research methods for analyzing and extracting information from biological, biomedical, and genomic data. Relevant examples are used to illustrate various techniques.

Biostatistics is an important part of undergraduate and postgraduate syllabus of life sciences and medicine because statistical analysis has become obligatory in all types of studies and researches including those on environment, toxicological, physiological, epidemiological and other aspects. Such analysis gives a better understanding of the data and helps in drawing a proper conclusion. It has become a necessity for publication of data in the standard national and international journals.

The topics of this issue cover useful areas of general knowledge including Computational Mathematics, Biostatistical Models and Methods, Computational Modeling in Medicine, Innovative Applications of Statistical Methods arising from the Biological, Medical & Public

Health Sciences. This special issue covers basic concepts, best practices, techniques, investigative challenges in clinic and research.

This special issue contains text information, but also a glossary of terms and definitions, contributions from international experts, in-depth analysis of issues, concepts, new trends, and advanced technologies in Biostatistics and in Computational Mathematics in the area of Life Sciences.

This issue will be an excellent source of comprehensive knowledge and literature on the topic of Biostatistics and Computational Mathematics.

All of us who worked on that, hope that readers will find it useful.

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Guest Editors
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Athina Lazakidou currently works at the University of Peloponnese, Department of Nursing in Greece as Lecturer in Health Informatics. She worked as a Visiting Lecturer at the Department of Computer Science at the University of Cyprus (2000-2002) and at the Department of Nursing at the University of Athens (2002-2007). She did her undergraduate studies at the Athens University of Economics and Business (Greece) and received her BSc in Computer Science in 1996. In 2000, she received her Ph.D. in Medical Informatics from the Department of Medical Informatics, University Hospital Benjamin Franklin at the Free University of Berlin, Germany. She is also an internationally known expert in the field of computer applications in health care and biomedicine, with six books and numerous papers to her credit. She was also Editor of the Handbook of Research on Informatics in Healthcare and Biomedicine *and* Handbook of Research on Distributed Medical Informatics and E-Health*, the best authoritative reference sources for information on the newest trends and breakthroughs in computer applications applied to health care and biomedicine. Her research interests include health informatics, (bio)medical databases, clinical decision support systems, hospital and clinical information systems, electronic medical record systems, telematics, and other web-based applications in health care and biomedicine.*

George Kaimakamis did his undergraduate studies at the University of Patras, Greece and received his BSc in Mathematics in 1995. In 1997, he received his Masters in Pure Mathematics and, in 2003, took his PhD from the Department of Mathematics, University of Patras. In 2009, he received his Masters in Applied Economics and Finance from the Economics Department, Athens University of Economics and Business. He has worked as a Lecturer at the Hellenic Army Academy for several years. and at the Technological Educational Institute of Chalkida. He currently works as an assistant professor at the Hellenic Army Academy His research interests include applications of mathematics. He has participated in various European R&D projects such as: ARCHIMIDIS, Educations and Culture LEONARDO DA VINCI and KARATHEODORI. He is a member of the Greek Mathematical Society and American Mathematical Society.