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Preface

Next-generation sequencing technologies, together with other emerging and quite diverse experimental techniques, are evolving rapidly, creating numerous types of omics data. These are creating new challenges for the expanding fields of bioinformatics and computational biology, which seek to analyze, process, integrate, and extract meaningful knowledge from these data. This calls for new algorithms and approaches from fields such as databases, statistics, data mining, machine learning, optimization, computer science, machine learning, and artificial intelligence. Clearly, biology is increasingly becoming a science of information, requiring tools from the computational sciences. To address these challenges, we have seen the surge of a new generation of interdisciplinary scientists with a strong background in the biological and computational sciences.

The International Conference on Practical Applications of Computational Biology & Bioinformatics (PACBB) is an annual international meeting dedicated to emerging and challenging applied research in bioinformatics and computational biology. Building on the success of previous events, this volume gathers the accepted contributions for the 13th edition of the PACBB Conference after being reviewed by different reviewers, from an international committee from 21 countries. PACBB'19 technical program includes 21 papers from authors of many countries (Australia, Colombia, Egypt, Germany, India, Malaysia, Portugal, Saudi Arabia, Slovakia, South Korea, Spain, Switzerland, Turkey, United Arab Emirates, UK, and USA) and different subfields in bioinformatics and computational biology. There will be special issues in JCR-ranked journals such as *Interdisciplinary Sciences: Computational Life Sciences*, *Integrative Bioinformatics*, *Information Fusion*, *Neurocomputing*, *Sensors*, *Processes*, and *Electronics*. Therefore, this event will strongly promote the interaction of researchers from diverse fields and distinct international research groups. The scientific content will be challenging and will promote the improvement of the valuable work that is being carried out by the participants.

This symposium was organized by the University of Malaysia Kelantan, University of Minho, University of Vigo, and University of Salamanca. This edition was held in Avila, Spain, from June 26–28, 2019. We thank the sponsors (IEEE

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