

Preface

This volume contains a revised version of the proceedings of the International Meeting on Computational Intelligence Methods for Bioinformatics and Biostatistics (CIBB 2014), which was in its 11th edition this year.

At a time of rapid information exchange through the Internet, conferences represent an important opportunity of direct interactions between scientists and fresh, informal communication (forum) of scientific findings. CIBB is a lively conference that started 11 years ago in Italy. It maintains a large Italian participation in terms of authors and conference venues but has progressively become more international and more important in the current landscape of bioinformatics and biostatistics conferences.

The topics of the conferences have kept pace with the appearance of new types of challenges in biomedical computer science, particularly with respect to a variety of molecular data and the need to integrate different sources of information. This year the conference saw an impressive array of invited speakers covering the two main sections: biostatistics and bioinformatics (Biostatistics Free Topics: Monica Chiogna, University of Padova, Italy; Chris Holmes, University of Oxford, UK; Jean Michel Marin, University of Montpellier II; Causality in Genomics: Carlo Berzuini, University of Manchester, UK; Stephen Burgess, University of Cambridge, UK; Vanessa Didelez, University of Bristol, UK; Florian Markowetz, Cancer Research UK - CRI, Cambridge, UK; Lorenz Wernisch, MRC - BSU, Cambridge, UK. Bioinformatics Free Topics: Ezio Bartocci, Vienna University of Technology, Austria; Francesco Falciani, University of Liverpool, UK; Jasmin Fisher, University of Cambridge, UK; David Gilbert, Brunel University, Uxbridge, UK; Syed Haider, University of Oxford, UK; Jeanine J. Houwing-Duistermaat, Leiden University Medical Centre, The Netherlands; Marta Kwiatkowska, University of Oxford, UK; Pedro Mendes, Manchester Institute of Biotechnology, UK; Marie-France Sagot, Université Claude Bernard, France; Marco Viceconti, University of Sheffield, UK. Special Session: Spatial Problems in the Nucleus: Julien Mozziconacci, Pierre and Marie Curie University, Paris, France).

This year 42 papers were selected for presentation at the conference, and each paper received two reviews or more. A further reviewing process took place for the 25 papers that were selected to appear in this volume. The authors are spread over more than 22 countries (all the continents were represented). The editors would like to thank all the Program Committee members and the external reviewers both of the conference and post-conference versions of the papers for their valuable work. We are also indebted to the chairs of the very interesting and successful special sessions (Computational Intelligence Methods for Drug Design; Spatial Problems in the Nucleus, Large-Scale; HPC Data Analysis in Bioinformatics: Intelligent Methods for Computational, Systems and

Synthetic Biology; Computational Biostatistics for Data Integration in Systems Biomedicine), which attracted even more contributions and attention.

A big thanks also to the sponsors, Bioinformatics Italian Society, Source Code for Biology and Medicine, and in particular to the University of Salerno, Vita-Salute San Raffaele University, and the University of Cambridge Computer Laboratory, which made this event possible. Finally, the editors would also like to thank all the authors for the high quality of the papers they contributed.

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