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Proceedings

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Preface

We are pleased to present the proceedings of the 5th Workshop on Algorithms in Bioinformatics (WABI 2005) which took place in Mallorca, Spain, October 3–6, 2005. The WABI 2005 workshop was part of the five ALGO 2005 conference meetings, which, in addition to WABI, included ESA, WAOA, IWPEC, and ATMOS. WABI 2005 was sponsored by EATCS (the European Association for Theoretical Computer Science), the ISCB (the International Society for Computational Biology), the Universitat Politècnica de Catalunya, the Universitat de les Illes Balears, and the Ministerio de Educación y Ciencia. See http://www.lsi.upc.edu/~wabi05/ for more details.

The Workshop on Algorithms in Bioinformatics highlights research work specifically developed to address algorithmic problems in biosequence analysis. The emphasis is therefore on statistical and probabilistic algorithms that address important problems in the field of molecular and structural biology. At present, given the enormous scientific and technical efforts in functional and structural genomics, the relevance of the problem is therefore constrained by the need for sound, efficient and specialized algorithms, capable of achieving solutions that can be tested by the biological community. Indeed the ultimate goal is to implement algorithms capable of extracting real features from real biological data sets. Therefore the workshop aims to present recent research results, including significant work in progress, and to identify and explore directions of future research.

Original research papers (including significant work in progress) or state-of-the-art surveys were solicited on all aspects of algorithms in bioinformatics, including, but not limited to: exact and approximate algorithms for genomics, genetics, sequence analysis, gene and signal recognition, alignment, molecular evolution, phylogenetics, structure determination or prediction, gene expression and gene networks, proteomics, functional genomics, and drug design. We received 94 submissions in response to our call for papers, and were able to accept 35 of these. In addition, WABI 2005 hosted a distinguished lecture by Dr. Marino Zerial of the Max Planck Institute for Molecular Cell Biology and Genetics in Dresden, given to the entire ALGO 2005 conference.

We would like to sincerely thank all the authors of submitted papers, and the participants of the workshop. We also thank the Program Committee and their sub-referees for their hard work in reviewing and selecting the papers for the workshop. The Program Committee consisted of the following 40 distinguished researchers:

Pankaj Kumar Agarwal (Duke University)
Tatsuya Akutsu (Kyoto University)
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Tandy Warnow (University of Texas)
Lusheng Wang (City Univeristy of Hong Kong)

Finally we would like to especially thank Bernard Moret, the de facto steering committee, for answering questions on history and precedence, for his advice on difficult protocol issues, and for setting up and hosting the EasyChair refereeing system used by the Program Committee.

July 2005

Rita Casadio and Gene Myers
WABI 2005 Program Co-chairs

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