10th IEEE International Workshop on High Performance Computational Biology
HiCOMB 2011

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Sheraton Anchorage Hotel & Spa, Anchorage, Alaska, USA

in conjunction with the 25th International Parallel and Distributed Processing Symposium

Message from the Workshop Chairs

Welcome to the 10th IEEE International Workshop on High Performance Computational Biology (HiCOMB). The interdisciplinary field of computational biology and bioinformatics is at the verge of several exciting possibilities owing to a rapid introduction of many disruptive experimental technologies to procure data. The resulting preponderance of data and the inherent complexity of processing have collectively placed an enormous demand on the computational methods that seek to model and analyze biological data — a demand that can be met only through a comprehensive embrace of high performance computing. The goal of this workshop is to provide a forum for discussion of the latest research in the design and development of high performance computing solutions to data- and compute-intensive problems arising from molecular biology and related life sciences.

The technical program was put together by Program Chair Ananth Kalyanaraman and twenty three members of a distinguished program committee. This year we received a total of twenty one submissions. Each paper was thoroughly reviewed by at least three members of the program committee. Based on the reviews, eleven papers were selected for presentation at the workshop and inclusion in the workshop proceedings. These papers cover a wide range of topics including sequence analysis, phylogenetics, genome-scale analysis, molecular dynamics, structure prediction and systems biology. The program also includes an invited keynote presentation by Prof. Rick Stevens from Argonne National Laboratory and University of Chicago.

We are grateful to the program committee members for submitting timely and thorough reviews. We wish to thank all the authors who submitted manuscripts to this workshop, without which this high quality technical program would not have been possible. We plan to continue this workshop in the forthcoming years and look forward to your continuing support in this endeavor.

Ananth Kalyanaraman, Srinivas Aluru, and David A. Bader

Workshop Organizers

Workshop Co-Chairs:

    Srinivas Aluru (Iowa State University)
    David A. Bader (Georgia Institute of Technology)

Program Chair:

    Ananth Kalyanaraman (Washington State University)

Program Committee:

    Gagan Agarwal, Ohio State University, USA
    Eric Aubanel, University of New Brunswick, Canada
    Sanjukta Bhowmick, University of Nebraska, USA
    Ümit Çatalyürek, Ohio State University, USA
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    Chris Oehmen, Pacific Northwest National Laboratory, USA
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    Michela Taufer, University of Delaware, USA
    Chau-Wen Tseng, University of Maryland, College Park, USA
    Tiffani Williams, Texas A&M University, USA
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    Albert Zomaya, The University of Sydney, Australia