Welcome to the Second International Workshop on the Challenges of Large Applications in Distributed Environments (CLADE 2004) and to Honolulu, Hawaii.

Advances in networking, high-end computers, large data stores, and middleware capabilities are ushering in a new era of large-scale, distributed applications, which dynamically marshal resources across a heterogeneous, distributed environment. With these opportunities come new challenges. The goal of this workshop is to encourage novel solutions to the complex issues that arise in large-scale applications of distributed computation and to promote the development of innovative applications that effectively use distributed resources and adapt to a wide range of heterogeneity and dynamics in space and time. This goal includes development, deployment, management, and evaluation of large-scale applications in science, engineering, medicine, business, economics, education, and other disciplines, on Grids and other distributed heterogeneous and dynamic computing environments. As such, the topics of this workshop span and integrate the work of many disciplines, from algorithms and programming models, to Grid systems middleware, to adaptive applications, data managers, and problem-solving environments that orchestrate the work of many components.

CLADE 2004 is the second in a series of workshops aimed at promoting the exchange of ideas, information, and novel developments among universities, federal laboratories, and industry, and it attracted paper submissions from institutions all over the world. With remarkable dedication, our program committee members and their colleagues carefully reviewed the many contributed papers, yielding the outstanding selection of 13 papers that appear in these proceedings.

This event and program would not have been possible without the dedicated efforts of the steering and program committees. We are grateful to the program committee for their work in assembling such an excellent program, and to the authors and co-authors who submitted the high-quality material from which that program was selected. We also gratefully acknowledge the IEEE Computer Society for sponsoring the conference, as well as significant support from the U.S. Department of Energy, the National Science Foundation, and Argonne National Laboratory. Our special thanks go to Drs. Mary Anne Scott and Frederica Darema for their support of this workshop, Professor Salim Hariri for his sage guidance, and Kelly Sutton and Julie Wulf-Knoerzer for handling the complex logistics and local arrangements. We also acknowledge William Kish, Xiaolin Li, and the CAIP Center at Rutgers University for vital system support during the paper submission and review process, and the organizers of the 13th High Performance Distributed Computing Conference for hosting the workshop.

Once again, we welcome you to Honolulu, and we hope you find CLADE 2004 to be an interesting and rewarding event.

Ray Bair, Argonne National Laboratory  
General Chair  

Manish Parashar, Rutgers University  
Program Chair