Preface

Welcome to the proceedings of GCC 2004 and the city of Wuhan. Grid computing has become a mainstream research area in computer science and the GCC conference has become one of the premier forums for presentation of new and exciting research in all aspects of grid and cooperative computing. The program committee is pleased to present the proceedings of the 3rd International Conference on Grid and Cooperative Computing (GCC 2004), which comprises a collection of excellent technical papers, posters, workshops, and keynote speeches. The papers accepted cover a wide range of exciting topics, including resource grid and service grid, information grid and knowledge grid, grid monitoring, management and organization tools, grid portal, grid service, Web services and their QoS, service orchestration, grid middleware and toolkits, software glue technologies, grid security, innovative grid applications, advanced resource reservation and scheduling, performance evaluation and modeling, computer-supported cooperative work, P2P computing, automatic computing, and meta-information management.

The conference continues to grow and this year a record total of 581 manuscripts (including workshop submissions) were submitted for consideration. Expecting this growth, the size of the program committee was increased from 50 members for GCC 2003 for 70 in GCC 2004. Relevant differences from previous editions of the conference: it is worth mentioning a significant increase in the number of papers submitted by authors from outside China; and the acceptance rate was much lower than for previous GCC conferences. From the 427 papers submitted to the main conference, the program committee selected only 96 regular papers for oral presentation and 62 short papers for poster presentation in the program. Five workshops, International Workshop on Agents, and Autonomic Computing, and Grid Enabled Virtual Organizations, International Workshop on Storage Grids and Technologies, International Workshop on Information Security and Survivability for Grid, International Workshop on Visualization and Visual Steering, International Workshop on Information Grid and Knowledge Grid, complemented the outstanding paper sessions.

The submission and review process worked as follows. Each submission was assigned to three program committee members for review. Each program committee member prepared a single review for each assigned paper or assigned a paper to an outside reviewer for review. Given the large number of submissions, each program committee member was assigned roughly 15–20 papers. The program committee members consulted 65 members of the grid computing community in preparing the reviews. Based on the review scores, the program chairs made the final decision. Given the large number of submissions, the selection of papers required a great deal of work on the part of the committee members.

Putting together a conference requires the time and effort of many people. First, we would like to thank all the authors for their hard work in preparing submissions to the conference. We deeply appreciate the effort and contributions of the program committee members who worked very hard to select the very best submissions and to put together an exciting program. We are also very grateful for the numerous suggestions

we received from them. Also, we especially thank the effort of those program committee members who delivered their reviews in a timely manner despite having to face very difficult personal situations. The effort of the external reviewers is also deeply appreciated. We are also very grateful to Ian Foster, Jack Dongarra, Charlie Catlett, and Tony Hey for accepting our invitation to present a keynote speech, and to Depei Qian for organizing an excellent panel on a very exciting and important topic. Thanks go to the workshop chairs for organizing five excellent workshops on several important topics in grid computing. We would also like to thank Pingpeng Yuan for installing and maintaining the submission website and working tirelessly to overcome the limitations of the tool we used.

We deeply appreciate the tremendous efforts of all the members of the organizing committee. We would like to thank the general co-chairs, Prof. Andrew A. Chien and Prof. Xicheng Lu for their advice and continued support. Finally, we would like to thank the GCC steering committee for the opportunity to serve as the program chairs as well as their guidance through the process. We hope that the attendees enjoyed this conference and found the technical program to be exciting.

Hai Jin and Yi Pan

Conference Committees

Steering Committee

Guojie Li (Institute of Computing Technology, CAS, China)
Xiaodong Zhang (National Science Foundation, USA)
Zhiwei Xu (Institute of Computing Technology, CAS, China)
Xianhe Sun (Illinois Institute of Technology, USA)
Jun Ni (University of Iowa, USA)
Hai Jin (Huazhong University of Science and Technology, China)
Minglu Li (Shanghai Jiao Tong University, China)

Conference Co-chairs

Andrew A. Chien (University of California at San Diego, USA)
Xicheng Lu (National University of Defense Technology, China)

Program Co-chairs

Yi Pan (Georgia State University, USA)
Hai Jin (Huazhong University of Science and Technology, China)

Workshop Chair

Nong Xiao (National University of Defense Technology, China)

Panel Chair

Depei Qian (Xi'an Jiaotong University, China)

Publicity Chair

Minglu Li (Shanghai Jiao Tong University, China)

Tutorial Chair

Dan Meng (Institute of Computing Technology, CAS, China)

Poster Chair

Song Wu (Huazhong University of Science and Technology, China)

Program Committee Members

Mark Baker (University of Portsmouth, UK)
Rajkumar Buyya (University of Melbourne, Australia)
Wentong Cai (Nanyang Technological University, Singapore)
Jiannong Cao (Hong Kong Polytechnic University, Hong Kong)
Guihai Chen (Nanjing University, China)
Xiaowu Chen (Beihang University, China)
Xuebin Chi (Computer Network Information Center, CAS, China)
Qianni Deng (Shanghai Jiao Tong University, China)
Shoubin Dong (South China University of Technology, China)
Xiaoshe Dong (Xi'an Jiaotong University, China)
Dan Feng (Huazhong University of Science and Technology, China)
Ning Gu (Fudan University, China)
Yadong Gui (Shanghai Supercomputer Center, China)
Minyi Guo (University of Aizu, Japan)
Yanbo Han (Institute of Computing Technology, CAS, China)
Yanxiang He (Wuhan University, China)
Jinpeng Huai (Beihang University, China)
Chun-Hsi Huang (University of Connecticut, USA)
Liusheng Huang (University of Science and Technology of China, China)
Kai Hwang (University of Southern California, USA)
Weijia Jia (City University of Hong Kong, Hong Kong)
Francis Lau (The University of Hong Kong, Hong Kong)
Keqin Li (State University of New York, USA)
Minglu Li (Shanghai Jiao Tong University, China)
Qing Li (City University of Hong Kong, Hong Kong)
Qinghua Li (Huazhong University of Science and Technology, China)
Xiaoming Li (Peking University, China)
Xiaola Lin (City University of Hong Kong, Hong Kong)
Xinda Lu (Shanghai Jiao Tong University, China)
Zhengding Lu (Huazhong University of Science and Technology, China)
Junzhou Luo (Southeast University, China)
Dan Meng (Institute of Computing Technology, CAS, China)
Xiangxu Meng (Shandong University, China)
Xiaofeng Meng (Renmin University of China, China)
Geyong Min (University of Bradford, UK)
Jun Ni (University of Iowa, USA)
Lionel Ni (Hong Kong University of Science and Technology, Hong Kong)
Depei Qian (Xi'an Jiaotong University, China)
Yuzhong Qu (Southeast University, China)

Hong Shen (Japan Advanced Institute of Science and Technology, Japan)
Ke Shi (Huazhong University of Science and Technology, China)
Ninghui Sun (Institute of Computing Technology, CAS, China)
Yuzhong Sun (Institute of Computing Technology, CAS, China)
David Taniar (Monash University, Australia)
Huaglory Tianfield (Glasgow Caledonian University, UK)
Weiqin Tong (Shanghai University, China)
David W. Walker (Cardiff University, UK)
Cho-Li Wang (The University of Hong Kong, Hong Kong)
Xingwei Wang (Northeastern University, China)
Jie Wu (Florida Atlantic University, USA)
Song Wu (Huazhong University of Science and Technology, China)
Zhaohui Wu (Zhejiang University, China)
Nong Xiao (National University of Defense Technology, China)
Cheng-Zhong Xu (Wayne State University, USA)
Baoping Yan (Computer Network Information Center, CAS, China)
Guangwen Yang (Tsinghua University, China)
Laurence Tianruo Yang (St. Francis Xavier University, Canada)
Qiang Yang (Hong Kong University of Science and Technology, Hong Kong)
Shoubao Yang (University of Science and Technology of China, China)
Zhonghua Yang (Nanyang Technological University, Singapore)
Pingpeng Yuan (Huazhong University of Science and Technology, China)
Weimin Zheng (Tsinghua University, China)
Yao Zheng (Zhejiang University, China)
Luo Zhong (Wuhan Univeristy of Technology, China)
Aoying Zhou (Fudan University, China)
Wanlei Zhou (Deakin University, Australia)
Xinrong Zhou (Åbo Akademi University, Finland)
Jianping Zhu (University of Akron, USA)
Mingfa Zhu (Lenovo Research, China)
Hai Zhuge (Institute of Computing Technology, CAS, China)

Local Arrangements Chair

Pingpeng Yuan (Huazhong University of Science and Technology, China)

Exhibition Chair

Qin Zhang (Huazhong University of Science and Technology, China)

Financial Chair

Xin Li (Huazhong University of Science and Technology, China)

Industry Chair

Xia Xie (Huazhong University of Science and Technology, China)

Publication Chair

Jianhua Sun (Huazhong University of Science and Technology, China)

Conference Secretary

Cong Geng (Huazhong University of Science and Technology, China)

Reviewers

Rashid Al-Ali
Jeff Dallien
Zhiqun Deng
Jonathan Giddy
Ian Grimstead
Zhengxiong Hou
Yanli Hu
Ajay Katangur
Yunchun Li
Na Lin
Zhen Lin
Hui Liu
Tao Liu
Xinpeng Liu
Sanglu Lu
Zhongzhi Luan
Yingwei Luo
Wendy MacCaull
Praveen Madiraju
Shalil Majithia
Zhongquan Mao
Stephen Pellicer
Weizong Qiang
Ling Qiu
Shrija Rajbhandari
Omer Rana
Geoffrey Shea
Praveena Tayanthi
Ian Taylor
Baoyi Wang
Guojun Wang
Hui Wang
Xianbing Wang
Xiaofang Wang
Xiaolin Wang
Xingwei Wang
Yuelong Wang
Mark Wright
Guang Xiang
Bin Xiao
Xia Xie
Shaomin Zhang
Yang Zhang
Ran Zheng
Jingyang Zhou
Cheng Zhu
Deqing Zou