

# Foreword

It gives us great pleasure to introduce this collection of papers to be presented at the 2006 International Conference on Scientific Computing (CSC'06), June 26 through 29, 2006, at Monte Carlo Resort, Las Vegas, Nevada, USA.

**The Academic Co-sponsors** of this year's event include: Massachusetts Institute of Technology's (MIT) Media Lab (<http://www.media.mit.edu/>); Texas Advanced Computer Center (TACC) of University of Texas at Austin (<http://www.tacc.utexas.edu/>); Institute for Informatics Problems of Russian Academy of Sciences, Moscow, Russia (The IIP of Russian Academy of Sciences is co-sponsoring the ILINTEC Workshop and MLMTA Conference only - <http://www.ipiran.ru/english/main.asp>); and The Ohio Supercomputer Center (OSC is co-sponsoring the CIC Conference only - <http://www.osc.edu>).

**Organizers and Co-sponsors at-large** include: A number of university faculty members and their staff (names appear on the cover of proceedings); World Academy of Science ([http://www.world-academy-of-science.org/worldcomp06/ws/index\\_html](http://www.world-academy-of-science.org/worldcomp06/ws/index_html)); and Computer Science Research, Education, & Applications Press.

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**Other Co-Sponsors** include: One Laptop Per Child Association (OLPC; <http://www.laptop.org/>); and International Technology Institute (<http://www.itiworld.org/>).

In addition to the above, several publishers of computer science and computer engineering books and journals, chapters and/or task forces of computer science associations/organizations from 12 countries, and developers of high-performance machines and systems have provided significant help in organizing the conference.

The program committee would like to thank all those who submitted papers for consideration. About 62% of the submissions were from outside the United States. Each submission was evaluated by two referees (except for papers that were submitted to chairs of sessions who were responsible for the evaluation of these papers.) The overall paper acceptance rate was about 28% (as of April 30, 2006).

We are very grateful to the many colleagues who helped in organizing the conference. In particular, we would like to thank the members of the CSC'06 Program Committee who we hope will offer their help again in organizing the next year's conference (CSC'07). The CSC'06 Program Committee members are:

*Prof. Rajan Alex, West Texas A&M University, Canyon, Texas, USA (CSC)*  
*Prof. Hamid R. Arabnia (General Chair), University of Georgia, Georgia, USA (FCS/CSC)*  
*Prof. Mark Burgin, University of California, Los Angeles, California, USA (FCS)*  
*Dr. Steve C. Chiu, Idaho State University, Pocatello, Idaho, USA (CSC)*  
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*Khalil Djelloul, Laboratoire d'Informatique Fondamentale de Marseille, Marseille, France (FCS)*  
*Dr. Petr Ya. Ekel, Pontifical Catholic University of Minas Gerais, Brazil (CSC)*  
*Dr. George A. Gravvanis (Vice Chair), Democritus University of Thrace, Greece (FCS)*  
*Prof. Valery P. Ilyin, Novosibirsk State Univ., Russia & Intel Novosibirsk Lab, Russia (CSC)*  
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*Prof. Mohammad Riaz Moghal, Dean, University. College of Engineering and Technology  
Mirpur, Pakistan (FCS)*  
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*Muhammad Omair Shafiq, DERI and University of Innsbruck (UIBK), Austria (CSC)*  
*Prof. Xiaoping Shen, Ohio University, Athens, Ohio, USA (CSC)*  
*Dr. Marc L. Smith, Colby College, Waterville, ME, USA (FCS)*  
*Ashu M. G. Solo, Maverick Technologies America Inc., Wilmington, Delaware, USA (FCS)*  
*Dr. K. Subramani, West Virginia University, USA (FCS)*  
*Prof. Layne T. Watson, Virginia Polytechnic Institute & State Univ., Virginia, USA (CSC)*  
*Dr. Fuming Wu, Texas A&M International University, Laredo, Texas, USA (CSC)*  
*Dr. Feng-Jen Yang, Prairie View A&M University, Texas, USA (FCS)*  
*Prof. Laurence T. Yang (Co-Chair, CSC), St. Francis Xavier University, Canada (CSC)*  
*Members of Task Force of FECS (Computer Science Curriculum Development)*  
*Members of Task Force of PDPTA (Scientific Computing and Concurrency Theory)*  
*Members of Task Force of RTCOMP (Real-Time Systems)*

We would also like to thank the followings: UCMSS (Universal Conference Management Systems & Support, San Diego, California, USA) for managing all aspects of the conference; Dr. Tim Field of APC for managing the printing of the proceedings; and the staff of Monte Carlo Resort in Las Vegas for the professional service they provided.

Last but not least, we would like to thank CSC'06 Associate Editors, Drs. George A. Gravvanis and Ashu M. G. Solo.

We present the proceedings of CSC'06.

Hamid R. Arabnia  
General Chair, CSC'06 Program Committee