

# INFOCOMP 2011

## Foreword

The First International Conference on Advanced Communications and Computation [INFOCOMP 2011], held between October 23 and 29, 2011 in Barcelona, Spain, inaugurated a series of events dedicated to advanced communications and computing aspects, covering academic and industrial achievements and visions.

The diversity of semantics of data, context gathering and processing led to complex mechanisms for applications requiring special communication and computation support in terms of volume of data, processing speed, context variety, etc. The new computation paradigms and communications technologies are now driven by the needs for fast processing and requirements from data-intensive applications and domain-oriented applications (medicine, geoinformatics, climatology, remote learning, education, large scale digital libraries, social networks, etc.). Mobility, ubiquity, multicast, multi-access networks, data centers, cloud computing are now forming the spectrum of de facto approaches in response to the diversity of user demands and applications. In parallel, measurements control and management (self-management) of such environments evolved to deal with new complex situations.

We take here the opportunity to warmly thank all the members of the INFOCOMP 2011 Technical Program Committee, as well as the numerous reviewers. The creation of such a broad and high quality conference program would not have been possible without their involvement. We also kindly thank all the authors who dedicated much of their time and efforts to contribute to INFOCOMP 2011. We truly believe that, thanks to all these efforts, the final conference program consisted of top quality contributions.

Also, this event could not have been a reality without the support of many individuals, organizations, and sponsors. We are grateful to the members of the INFOCOMP 2011 organizing committee for their help in handling the logistics and for their work to make this professional meeting a success.

We hope that INFOCOMP 2011 was a successful international forum for the exchange of ideas and results between academia and industry and for the promotion of progress in the areas of communications and computations.

We are convinced that the participants found the event useful and communications very open. We also hope the attendees enjoyed the historic charm of Barcelona, Spain.

### **INFOCOMP 2011 Chairs:**

#### **General Chair**

Claus-Peter Rückemann, Westfälische Wilhelms-Universität Münster / Leibniz Universität Hannover / North-German Supercomputing Alliance, Germany

#### **Advisory Chairs**

Hans-Joachim Bungartz, Technische Universität München (TUM), Germany

Laura Carrington, University of California at San Diego (UCSD) / San Diego Supercomputer Center (SDSC), USA

Petre Dini, Concordia University, Canada / IARIA, USA

Erik Elmroth, Department of Computing Science and HPC2N, Umeå University, Sweden

Sik Lee, Supercomputing Center KISTI, Korea Institute of Science and Technology Information (KISTI), Korea

Subhash Saini, NASA, USA

**Academia Chairs**

Bruce Berriman, California Institute of Technology, USA

Evgenia N. Cheremisina, Dubna International University, Russia / Academic of Russian Academy of Natural Sciences, Moscow, Russia

Malgorzata Pankowska, University of Economics, Katowice, Poland

**Research Institute Liaison Chairs**

Kei Davis, Los Alamos National Laboratory / Computer, Computational, and Statistical Sciences Division, USA

Daniel S. Katz, Computation Institute, University of Chicago & Argonne National Laboratory, USA

Harald Kornmayer, Cooperative State University of Baden-Wuerttemberg, Mannheim, Germany

Ivor Spence, School of Electronics, Electrical Engineering and Computer Science, Queen's University Belfast,

Northern Ireland, Research for High Performance and Distributed Computing / Queen's University Belfast, UK

**Industry Chairs**

Wolfgang Christmann, christmann informationstechnik + medien GmbH & Co. KG

William R. Claycomb, CERT Insider Threat Research Center/Carnegie Mellon University, USA

Edgar Leon, IBM Research, Austin, USA

Hans-Günther Müller, SGI Silicon Graphics - Göttingen, Germany

INFOCOMP Special Area Chairs on Large Scale and Fast Computation

Christopher Jordan, The University of Texas at Austin, USA

Walter Lioen, SARA Computing and Networking Services Amsterdam, The Netherlands

**Special Area Chairs on Networks and Communications**

Noelia Correia, University of the Algarve, Portugal

Wolfgang Hommel, Leibniz Supercomputing Centre - Munich, Germany

George Michelogiannakis, Stanford University, USA

**Special Area Chairs on Advanced Applications**

Kurt Schneider, Fachgebiet Software Engineering, Leibniz Universität Hannover, Germany

**Special Area Chairs on Evaluation Context**

Dominic Eschweiler, Jülich Supercomputing Centre, Germany

Philipp Kremer, German Aerospace Center (DLR), Institute of Robotics and Mechatronics, Oberpfaffenhofen, Germany