Preface

Subhash Bhalla

Graduate School of Computer Systems,
University of Aizu, Aizu-Wakamatsu,
Fukushima 965-8580, Japan
E-mail: bhalla@u-aizu.ac.jp

Biographical notes: Subhash Bhalla received a PhD in Computer Science in 1984. His research interests include database query languages.

Information systems in public utility and healthcare services depend on computing infrastructure. Many research efforts are being made in related areas, such as web-based computing, information access by web users and wireless computing (for example, Auto-ID laboratories and a project at MIT). Government agencies in many countries plan to launch facilities in education, healthcare and information support as a part of e-government initiative. In this context, information interchange management has become an active research field. A number of new opportunities have evolved in design and modelling based on new computing needs of the users. Database systems play a central role in supporting networked information systems for access and storage management aspects.

In the same context, the fourth international workshop on Databases in Networked Information Systems (DNIS) 2005 was held on 28–30 March 2005 at the University of Aizu in Japan. The workshop programme included research contributions and invited contributions. A view of research activity in related areas was provided by special session on the topics. These included Information Interchange Management, Web Data Management Systems and Networked Information Systems. Some invited papers were contributed by Dr. Umeshwar Dayal, Professor Elisa Bertino, Professor Masahito Hirakawa and Professor William I. Grosky. Revised versions of these and other selected contributed manuscripts have been included in this issue.

The manuscripts in this issue begin by introducing problems concerning large-scale computations. The paper by Lukas Pichl et al. presents a model of data mining from electronic journals. Similarly, the manuscript by Eiji Ikoma et al. describes a data mining application for Earth Environmental Data Archives. The paper by Yukari Shirota describes a web-based courseware. In the same section, finally, the paper by Mark Sifer describes a design for large-scale management of data by using the traditional data warehousing techniques.

Apart from introducing the large-scale computing applications, the contribution by Dheeraj Bhardwaj and Manish Sinha presents a computational grid for supporting data transfers at high speeds. The paper by Bhalla et al. presents a user level dynamic query interface for access to information resources. Further, there are four invited research manuscripts that present design of virtual reality and multimedia systems. Namely, these are manuscripts by Professor E. Bertino, Dr. Umeshwar Dayal, Dr. M. Hirakawa and Professor W. Grosky. The final two papers, by Bottoni et al. and Watanobe et al. present algorithmic aspects of supporting large-scale computations for modern applications.