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# Computational Science and its Applications

# J.UCS Special Issue

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This issue features a special issue on "Computational Science and its Application". Computational Science is a main pillar of most of the present research, industrial and commercial activities and plays a unique role in exploiting ICT innovative technologies. Due to the latest development and the availability of high performance computing, including parallel computing, grid computing, and cloud computing, there is a critical need to employ efficient and effective computational methods and algorithms in various applications, including computational biology, computational geometry, computational physics, computation chemistry, computational finance, graphics and visualization, scientific data management, data mining, etc.

This issue features selected papers from the International Conference on Computational Science and Its Applications (ICCSA2009) held in June 29-July 1, 2009, Kyung Hee University, Suwon, South Korea. In addition to extended papers from ICCSA2009, a special issue CFP has been distributed to a wider community through various mailing lists. Finally, we selected six papers to be included in this issue.

The first paper presents Newton method for nonlinear dynamic systems. It presents numerical algorithms to solve nonlinear equations given the discrete form of the equations. The second and third papers focus on 3D head pose or facial expression, and multi-human tracking. The fourth and fifth papers concentrate on data mining, especially opinion summarization in online customer reviews, and knowledge sharing based ontological approach. Finally, the last paper proposes an entropy optimization for social networks.

As general co-chairs and program co-chairs of ICCSA2009, as well as the guest editors of J.UCS special issue on Computational Science and Its Applications, we

would like to congratulate the authors of papers appeared in this special issue of J.UCS. We would also like to thank the PC members of ICCSA2009 who conducted the initial reviewing process for the conference and external reviewers who conducted further reviews of extended papers submitted to this special issue.

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Guest Editors
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