Editorial Note

The RoEduNet Conference has traveled over the years around Romania, in the most important nodes of the Romanian Educational Network, completing his tour for the second time in Sibiu 2010. Over the years, RoEduNet Conference has grown in scientific and research significance and has contributed to the advancement and adoption of new technologies, solutions, and emerging new paradigms for educational computer networking. The Conference has been, and will be an inspiring forum for the exchange of ideas and results. On behalf of the 2010 Edition Executive Committee, I present to you the IJCNC Special Issue of the 9th RoEduNet IEEE International Conference.

Using the wide base of papers from the Conference, the Editors have selected the best-reviewed ones to be enlarged and included in this Special Issue. These contributions cover a wide variety of topics, from Network Security, Network Management to Emerging Network Technologies, as well as Grid and Cloud computing, which is of special current interest.

Thus, in their paper entitled *Thermal Analysis of Climate Regions Using Remote Sensing and Grid Computing*, Cristina Serban and Carmen Maftei are using Grid Computing to implement a service for the analysis of climate regions. Software agents are also introduced in our issue by Pooja Jain and Deepak Dahiya in their work *Knowledge Management System Design Using Extended Gaia*, building an efficient Learning Resource Centre. In connection with the same field of e-learning, Monica Vladoiu and Zoran Constantinescu in the paper entitled *U-Learning within a Context-Aware Multiagent Environment* presents the multi-agent architecture of a context-aware system and the learning scenarios within ubiquitous learning environments.

In *System of Systems - a Holistic Approach for Telemedicine*, the authors Viorel Petcu and Adrian Petrescu are focusing on a distributed system architecture, and describe the main aspects of the distributed telemedicine systems efficiency evaluation, while an application of synthetic instrumentation for measuring the field of wireless transfer systems is offered by the paper of Radek Martinek and Jan Žídek. A more up-to-date paper analyzing the continuously extended peer-to-peer network is the *BitTorrent Swarm Analysis through Automation and Enhanced Logging* by Razvan Deaconescu, Marius Sandu-Popa, Adriana Draghici and Professor Nicolae Tapus. Their approach can be employed as an analysis system of network characteristics and protocol implementation influence of BitTorrent swarm performance.

This Special Issue comprises two papers from Patricia Marcu together with Dr. Wolfgang Hommel from Leibniz Supercomputing Centre, Germany, one of the main nodes of European GEANT network. One of the papers presents the integrated monitoring solution developed for the Large Hadron Collider (LHC) at CERN, while *Inter-Organizational Fault Management: Functional and Organizational Core Aspects of Management Architectures* is showing their latest research regarding fault management, a crucial issue, required to locate and solve problems which reduce the quality of service of inter-organizational networks. In the same objective, the paper of a team from Technical University of Cluj-Napoca, Romania lead by professor Virgil Dobrota, proposes a congestion control protocol based on Network Coding operations for the special case of butterfly topology, introducing a signaling protocol required for dynamic activation and deactivation of coding operations. An application-layer multicast implementation in order to construct and maintain efficient distribution structures between end-hosts using PlanetLab is finally presented by Genge Béla and Haller Piroska in *Using Planetlab to Implement Multicast at the Application Level*.

I would like also to thank our Editorial board for their strong commitment and all the hard work in reviewing and keeping the track with the authors. Also our gratitude for the great support of this journal, it is a pleasure to work with such dedicated people.

Special Issue Editor,

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