The IADIS International Conference Telecommunications, Networks and Systems 2008 was held in Amsterdam, The Netherlands, 22-24 July, 2008.

The IADIS Telecommunications, Networks and Systems 2008 Conference covered theory, design and application of computer and telecommunication networks and systems. During recent years there has been an impressive increase in the use of networked applications and networks are now key resources in any information system configuration. Wireless and fixed-line networks complemented by a growing range of mobile devices are having a significant impact on the way we run our lives and our businesses.

This Conference provided an international meeting for academic researchers and industry practitioners to share and exchange their experiences, discuss challenges and present original ideas in all aspects of networks, telecommunications and systems. We welcomed research papers which dealt with specific networked application issues, telecommunication and networking research problems and implementation or case study reports. It offered an opportunity to discuss ideas about newly emerging systems, protocols, standards, services and applications in the area of telecommunications and networking.

This year Conference received 74 submissions from more than 23 countries. Each submission has been anonymously reviewed by an average of four independent reviewers, to ensure that accepted submissions were of a high standard. Consequently only 8 full papers were approved which means an acceptance rate of 11%. A few more papers were accepted as short papers, reflection papers and posters. An extended version of the best papers will be published in a special issue of the IJBDCN - International Journal of Business Data Communications and Networking (ISSN: 1548-0631), and in the IADIS International Journal on Computer Science and Information Systems (ISSN: 1646-3692).

The submissions were accepted under the following main areas:

- Adoption and diffusion of networking technologies
- Business applications of telecommunications
- Cross-border network-based information systems
- Design and performance evaluation of new network application and systems
- Designing, deploying and using networked systems in specialized sectors (i.e. Health, Education, Manufacturing)
- Effects of legislation and regulation on telecommunications
- Emerging networking trends
- Frameworks for wireless security
- Grid, Cluster and Internet Computing
- Internetworking Protocols
- Location- and context-aware distributed systems
- Management of telecommunications in organizations
- Mobile computing, mobile networks, and mobile agents
- Mobility and m-commerce issues
- Network management contingency issues
- Network Performance Analysis and Evaluation
- Network pricing issues and strategies
- Networking: architectures, services, routing, and applications
- Outsourcing of networking and data communication services
- Peer-to-Peer (P2P) Systems
- Policy-based network management systems
- Policy-based security systems
- Quality of Service issues associated with networked systems
- Security of interconnected systems
- Sensor, mesh, and ad hoc networks
- Standards and network interoperability issues
- Strategic use of networking technologies
- Success factors of networked systems
- Pervasive Computing Environments
- Telecommuting, remote access and Virtual Private Networks
- Use of distributed services over wireless networks
- Wireless and Mobile Networking and Computing

The Conference included the presentation of full papers, short papers, reflection papers and posters, and also included a keynote presentation and a tutorial by Professor Ananth Srinivasan, Director of the Centre for Digital Enterprise, The University of Auckland, New Zealand.

**Keynote Presentation:**

**The future of Internet Computing: Business Models, Economics, and Social Implications**

**Abstract:**

The new wave of internet computing holds considerable promise for individuals, organizations, and society. Powerful ideas have found a voice through technology to enhance the internet experience at all three levels. The term Web 2.0 is loosely used to convey this sense of advancement but the overall implications at these three levels need to be well understood. At the individual level, new technologies have provided the individual with a voice that allows widespread dissemination of personally held notions through a combination of media choices. At the organizational level, new business models have emerged and productivity issues are beginning to be leveraged. At the societal level, these technologies are being used to increase social participation in important events such as national elections. In this talk we attempt to understand these trends through an organised framework and highlight some examples of these technologies to place these examples in context.

**Conference Tutorial:**

**The Services Revolution: Implications for Research and Teaching**

**Abstract:**

The growth of services as a component of many economies has been rapid in the recent past and the trend in the future seems to indicate that this will continue. The formal study of services has traditionally occurred in disciplinary pockets where the identity of the discipline has overshadowed more important lines of enquiry about the fundamental nature of services. Recently the term Service Science Management and Engineering has emerged as an idea to capture the important dimensions of the issue under one umbrella. The key concept is that a proper study of services as a discipline in its own right involves the coming together of management practice, engineering design, and scientific enquiry and draws from existing well established disciplines. This has led to the joint design of research and teaching imperatives in many institutions around the world. In this talk, we will explore the nature of service science and explore various aspects of research and teaching in the area.
Conference Best Papers:

- STUDIES ON THE COMPUTATIONAL SCALE OF A DISTRIBUTED RCA ALGORITHM FOR WLANS by Xiaoguang Ma, Ming Yu and Bing W. Kwan, Florida State University

Abstract:

For the Radio Channel Allocation (RCA) of WLANs, how to efficiently allocate the limited number of channels to achieve high throughput is a challenging problem. The major difficulty in solving the RCA problem is to maximize the throughput of the entire network using the min-max optimization scheme. Usually, it is solved by using various heuristic methods. However, it is not clear whether the min-max optimization problem is an NP-hard problem or not. In this paper, we propose to analyze a typical RCA method, namely, the distributed heuristic algorithm (DHA) [2], by using both analytical and statistical analysis in terms of the computational scale of the method. The computation scale of an algorithm is defined as the number of channel reallocation times until the network reaches a convergence state. By extensive simulations, we demonstrate that DHA reaches the convergence state very quickly. The total number of channel reallocations is a log-logistic distribution. After finding out all of the different network configurations, for each of the configurations, we develop a method to estimate the computational scale. We find that the overall upper limit of the computational scale, i.e., $O(I)$.


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