

# Concurrency and Computation: Practice and Experience

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## Special Issue on Multimedia Computing and Management in Cloud Environment

### **Introduction**

Cloud computing is attracting more and more researchers, which moves most heavy tasks from clients to servers. Generally, the cloud servers can be managed in order to implement various tasks requested by clients, while clients' terminals may be very lightweight in energy cost or computational complexity. Especially, with the terminal containing only the explorer, clients can consume various services. Software-as-a-service (SaaS) is the typical application that requests users to run the software in cloud servers instead of downloading it. Thus, it saves the cost of transmitting or storing multiple software copies. Cloud computing has been used in Internet-based systems, and is being extended to telecommunication systems.

In cloud computing environment, various innovative multimedia (text, image, audio, video, graph, etc.) services appear. For example, users may work on one document or drawing together over Internet, users can push their complicated computing tasks to cloud servers, and users can forward their multimedia content (e.g., TV program) to cloud servers with the aim of obtaining the analyzed result (e.g., a short summarization). To support these services, various computing or management techniques are required, e.g., multimedia processing, coding, communication, storage and access. Additionally, in cloud computing, security and privacy become very important issues, e.g., user authentication and authorization, information exchange between clients and cloud servers, privacy protection of user-uploaded content, etc.

This special issue aims to collect the best papers contributed by leading experts, and expose the readership to the latest research results on multimedia computing and management in cloud computing environment. It will include a number of related topics, demonstrate pioneer work, investigate the novel solutions and discuss the future trends in this field.

### **Topics**

Submitted papers may focus on theoretical model, architecture construction, algorithm design or hardware implementation. Both review papers and technical papers are expected. The topics include but are not limited to

- Resource allocation in cloud computing
- Task management in cloud computing
- Cloud computing platform and system
- Multimedia coding for cloud based applications
- Multimedia processing in cloud environment
- Multimedia communication in cloud environment
- Multimedia content management in cloud environment
- Multimedia storage and access in cloud platforms
- Multimedia service and system in cloud environment

Multimedia security and protection in cloud computing  
User authentication/authorization in cloud computing  
Secure communication in cloud computing  
Copyright protection and tracing in cloud computing  
Privacy preservation in cloud computing

### **Submission**

The submitted papers should describe original research which is not published nor currently under review by other journals or conferences.

Besides normal submissions, the selected best papers of the following conferences are invited to this special issue:

- The 2010 International Conference on Multimedia Information Networking and Security (MINES 2010), <http://www.ieee-mines.org/>
- The 2<sup>nd</sup> International Workshop on Security in Cloud Computing (SCC'2010), <http://bingweb.binghamton.edu/~ychen/SCC2010.htm>

There should be at least 40% differences between the extended/revised paper and conference paper.

Author guidelines for preparation of manuscript can be found at <http://www3.interscience.wiley.com/journal/117946197/grouphome/home.html>. All manuscripts and any supplementary material should be submitted through the online submission

system: <http://www3.interscience.wiley.com/journal/117946197/grouphome/home.html>. All papers will be rigorously reviewed based on their originality, high scientific quality, organization, clarity of writing, and support provided for assertions and conclusion.

### **Important Dates**

Submission deadline:	December 25, 2010
First revision notification:	April 1, 2011
Submission of revised paper:	May 1, 2011
Final acceptance notification:	June 1, 2011
Final manuscript due:	June 30, 2011

### **Guest Editors**

Dr. Shiguo Lian  
France Telecom R&D (Orange Labs) Beijing, China  
E-mail: shiguo.lian@orange-ftgroup.com

Prof. Athanasios Vasilakos  
University of Western Macedonia, Greece  
E-mail: vasilako@ath.forthnet.gr

### **Short biographies of guest editors**

**Shiguo Lian** got his Ph.D. from Nanjing University of Science and Technology, China. He was a research assistant in City University of Hong Kong in 2004. He has been Research

Scientist with France Telecom R&D (Orange Labs) Beijing since 2005. He authors or co-authors more than 80 refereed international journal/conference papers and 14 filed patents. He has authored and edited 5 books. His research interests include intelligent multimedia analysis and services, ubiquitous computing and communication, information and communication security. He got the Nomination Prize of "Innovation Prize in France Telecom", and he got "Top 100 Doctorate Dissertation in Jiangsu Province" in 2006. He has edited 8 special issues for international journals. He is the TPC members of IEEE ICC2008/2009/2010, IEEE GLOBECOM2008/2010, IEEE CCNC2009/2010, IWDW2008, etc., and invited reviewers of famous journals, e.g., IEEE Communications Magazine, IEEE Transactions on Image Processing, IEEE Transactions on Circuits and Systems I/II, Computer Communications, Multimedia Tools and Applications, Chinese Journal of Electronics, etc. For some of his publications, please see <http://www.informatik.uni-trier.de/~ley/db/indices/a-tree/l/Lian:Shiguo.html>.

**Athanasios V. Vasilakos** is currently a Professor with the Department of Computer and Telecommunications Engineering, University of Western Macedonia, Kozani, Greece, and a Visiting Professor with the Graduate Program of the Department of Electrical and Computer Engineering, National Technical University of Athens (NTUA), Athens, Greece. He has authored or coauthored over 200 technical papers in major international journals and conferences. He is author/coauthor of five books and 20 book chapters in the areas of communications. Prof. Vasilakos has served as General Chair, Technical Program Committee Chair, and symposium Chair for many international conferences. He is Chairman of the Intelligent Systems Applications Technical Committee (ISATC) of the IEEE Computational Intelligence Society (CIS). He served or is serving as an Editor or/and Guest Editor for many technical journals, such as the IEEE TRANSACTIONS ON SYSTEMS, MAN, AND CYBERNETICS—PART B: CYBERNETICS, the IEEE TRANSACTIONS ON INFORMATION TECHNOLOGY IN BIOMEDICINE, the IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS, the *IEEE Communications Magazine*, and the *ACM Transactions on Autonomous and Adaptive Systems*. He is founding Editor-in-Chief of the *International Journal of Adaptive and Autonomous Communications Systems* (IJAACS, <http://www.inderscience.com/ijaacs>) and the *International Journal of Arts and Technology* (IJART, <http://www.inderscience.com/ijart>).