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Special Issue on

Green and Cloud Computing

Journal of Signal Processing Systems

We live in a world with all kinds of constraints. Energy consumption is a bottleneck for information computing and communication. Green computing aims to reduce energy cost and CO₂ emissions as well as to effectively reuse and recycle power usage. Making the world green is the responsibility of designers and users of all the information and communication technologies. The topics will include energy-efficient CPUs, servers, data centers, networks, and peripherals as well as reduced resource consumption.

The emerging cloud computing provides a new way to address the constraints of limited energy, capabilities, and resources. Researchers and practitioners embrace cloud computing as a new approach that has the potential for profound impacts on our daily life and world economy. Cloud computing is the second focus of this special issue. It includes cloud models, heterogeneous architecture, resource allocation, load balance, multimedia, and QoS, etc.

Mobile cloud computing platform is a new area attracting more and more studies. The emerging applications range from mobile computing, resource sharing, data storage, device power and traffic optimization, tasks synchronization, multimedia, fast communication, secure and reliable issues, etc. Hence, next generation green-aware mobile cloud computing is the third focus for this special issue.

Scope of Contributions

The object of this special issue is to explore recent advances and disseminate state-of-the-art research on novel technologies on Green Computing and Cloud Computing. Submission of a manuscript implies: that the work described has not been published before; that it is not under consideration for publication anywhere else; that its publication has been approved by all co-authors, if any, as well as by the responsible authorities – tacitly or explicitly – at the institute where the work has been carried out. The topics of interest for the special issue include, but are not limited to:

1. Green Computing
   - Green computing and networking models
   - Green power grid
   - Green data centers
   - Green metrics
   - Dynamic allocation algorithms of computing load and networking load
   - Energy-efficient design and algorithms
   - Energy consumption measurement and profiling power efficiency
   - Power usage prediction and power management of data centers
2. Cloud Computing
   - Cloud computing and networking models
   - Heterogeneous architecture for cloud computing
   - Dynamic resource sharing algorithm for cloud computing
   - Load balance for cloud computing
   - Cloud-based audio/video streaming techniques
   - Cloud-based real-time multimedia techniques
   - Quality of Service (QoS) improvements techniques

3. Next-generation Green Cloud Computing Services and Applications
   - New applications for cloud-supported mobile green computing
   - New services supported by green-aware mobile cloud computing techniques (e.g., monitoring, transportation, smart grid, healthcare, etc.)
   - Social networking services and green cloud computing
   - Security and privacy issues in green cloud computing

**Manuscript Submission**

Authors must follow the Journal of Signal Processing Systems guidelines for preparation of the manuscript. For further details, please refer to "Instruction for Authors" in Journal of Signal Processing Systems website at: [http://www.springer.com/engineering/signals/journal/11265](http://www.springer.com/engineering/signals/journal/11265). Authors should submit their manuscripts online, please follow the instructions at website: [http://www.editorialmanager.com/vlsi/](http://www.editorialmanager.com/vlsi/). PDF is not an acceptable file format. Any submission that fails to follow the instructions will be rejected without review.

**Important Dates**
Submission Deadline: December 1, 2012
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Final Manuscript Due: April 1, 2013
Planned Publication: June 2013

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