Call for Papers

Special Issue on Selected Papers from the SYNASC'14 Distributed Computing Track

During the past 15 years **SYNASC** (http://synasc.ro/2014/) has built a strong nucleus of researchers which gather every year in September to discuss their ongoing research. The multidisciplinary nature of the conference brings together people from various computer science areas, including symbolic computing, numerical analysis, multi-agent systems, nature inspired processing and distributed/parallel computing. All these are hot topics in computer science and provide the attendees with the chance of uncovering interdisciplinary research ideas and concrete use cases for their work.

Among them, **distributed computing**, with an increasing interest in elastic distributed application on platforms such as clouds and HPC on clouds, is in the unique position of being at the center of the scene. It allows researchers from various fields to extend their experiments and test their ideas on large scale infrastructures. In this frame the **Distributed Computing track** is a great opportunity for scientists working on topics related to clouds, grids, P2P, Internet of things, and parallel and distributed systems in general to present their work, discover new challenges, and find real use cases and applications for their research. With the global focus leaning towards (inter-) cloud and utility computing researchers start to feel the benefit of these systems too. However we feel there is much to be done before existing applications from other fields can be fully ported on these new platforms. SYNASC and the Distributed Computing track are therefore a great opportunity for addressing the interdisciplinary applicability of distributed scalable systems.

For the past 4 years the Distributed Computing track has been an important part of the conference attracting numerous researchers with interesting papers. The **track**'s **acceptance rate of 30%** is proof of the increased competitiveness in submitting excellent applied and fundamental research to the SYNASC Distributed Computing track.

This Special Issue call is based on invitation only and limited to extended papers accepted for presentation at the SYNASC'14 DC track. Work addressing any of the following topics is welcomed:

- **Models** for parallel and distributed systems including models on resources and networks, semantic representation, negotiation, trace management, simulators;
- Parallel and distributed **algorithms** for clouds, grids, HPC, GPUs, FPGAs, P2P systems, autonomous systems. Work should focus on scheduling, scaling, load balancing, networks, fault-tolerance, gossip algorithms, energy saving;
- **Architectures and platforms** for parallel and distributed computing, including self-managing and autonomous systems, negotiation protocols, big data analysis architectures, HPC on clouds,

GPU processing, PaaS for (inter)cloud, Internet of Things, brokering platforms, mobile computing solutions;

- **Applications** for parallel and distributed systems, including work on cross disciplinary (scientific) applications for clouds/grids, big data platforms, web applications, workflow platforms, network measurement tools, programming environments;
- Any **other topics** deemed relevant to the field of distributed computing.

Manuscripts should **not exceed 16 pages** in length and must be prepared for publication according to the following journal's Author Guidelines: http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)15320634/homepage/ForAuthors.html. Prospective authors should submit full manuscripts in MS Word or PDF format.

Papers should not be submitted for consideration or accepted in any other venue. **At least 30% novelty** is required for the extended versions and a **cover letter indicating the additional results** must be submitted with the manuscript. All submitted papers will be reviewed by at least three reviewers and selected based on their originality, significance, relevance, and clarity of presentation

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Important dates:

Submission deadline: December 15, 2014

Acceptance notification: March 31, 2015

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Open call: No