

CALL FOR PAPERS
Advances in Autonomic Computing:
Formal and Practical Aspects of Context-Aware Systems

Guest Editor:

Phan Cong-Vinh
Department of Information Technology
NTT University, Vietnam
Email: pcvinh@ntt.edu.vn
URL: <http://vn.linkedin.com/in/phanvc>

Introduction:

Context awareness (CA) refers to systems can both sense and react based on their environment. The systems may have information about the circumstances under which they are able to operate and adapt their behavior accordingly based on rules or an intelligent stimulus. Such systems are a component of a mobile computing environment.

Currently context has been considered as part of a process in which users are involved, hence specifying and developing context models are needed to support context-aware applications to (a) adapt interfaces, (b) tailor the set of application-relevant data, (c) increase the precision of information retrieval, (d) discover services, (e) make the user interaction implicit, or (f) build smart environments. Context related to human factors is structured into three categories: (a) information on the user, (b) the user's social environment, and (c) the user's tasks. Likewise, context related to physical environment is structured into three categories: (a) location, (b) infrastructure, and (c) physical conditions.

Context-aware mobile computing systems are concerned with the acquisition of context, the abstraction and understanding of context, and application behavior based on the recognized context. In some applications, as the user's activity and location are crucial, context awareness has been concentrated more deeply on location awareness and activity recognition. Three important aspects of context are: (a) where you are; (b) who you are with; and (c) what resources are nearby.

Goals:

This special issue on Advances in Autonomic Computing: Formal and Practical Aspects of Context-Aware Systems in the Springer Journal of TCS is a place for highly original ideas about how CA is going to shape context-aware systems of the future. Hence, it focuses on rigorous approaches and cutting-edge solutions which break new ground in dealing with the properties of context-aware systems. Its purpose is to make a formal basis more accessible to researchers, scientists, professionals and students as well as

developers and practitioners in computing science by providing them with state-of-the-art research results and future opportunities and trends.

Scope:

Original papers are solicited for this special issue. In particular, theoretical contributions should be formally stated and justified, and practical applications should be based on their firm formal basis. Suggested topics include, but are not limited to, the following:

- Context-aware models
- Context-aware control
- Context-aware algorithms
- Context-aware networks
- Context-aware computing
- Context-awareness calculi
- Context-awareness representation
- Context-awareness-based systems
- Logic in context-awareness
- Context-awareness reasoning
- Formal methods of context-awareness
- Context-awareness-based optimization and swarm Intelligence
- Knowledge-based awareness

This list is not restrictive - prospective authors are encouraged to contact the editor before submitting a paper to determine whether the submission is within the scope of this special issue.

Submission Procedure:

Prospective authors may check the *Guidelines for Authors of TCS* at <http://www.springer.com/west/home/computer/lncs?SGWID=4-164-6-151275-0>.

Submitted papers must not have been previously published or be currently under consideration for publication elsewhere. Conference papers should be significantly extended and revised, thus the authors should indicate this at the time of submission. All papers will be rigorously refereed. Complete papers in PDF format should be submitted to the Guest Editor before **December 20, 2012** via email. The paper should be included as an email attachment or the author may provide a URL where the file can be downloaded. If a paper has co-authors then a correspondence contact out of co-authors must be indicated. An acknowledgment of receipt of the paper will be provided within 24 hours of submission.

Important Dates:

Papers Submission Deadline: December 20, 2012

Acceptance Notification: February 20, 2013

Final Papers Due: March 01, 2013

Expected Publication: Spring 2013