**SPECIAL ISSUE ON**
*Context-Aware Systems and Applications*
*AND*
*Nature of Computation and Communication (ICCASA+ICTCC 2019)*

**Overview:**

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 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.

Natute of Computation and Communication focuses on rigorous approaches and cutting-edge solutions, which encompass three classes of major methods:

- Those that take inspiration from nature for the development of novel problem solving techniques;

- Those that are based on the use of computers or networks to synthesize natural phenomena; and

- Those that employ natural materials (e.g., molecules,) to compute or communicate.

This special issue on Context-Aware Systems: and Applications (ICCASA 2019) and Natute of Computation and Communication (ICTCC 2019) in the ACM/Springer Mobile Networks and Applications (MONET) Journal is a place for highly original ideas about how CA and Nature-Inspiration are going to shape computing systems of the future. Hence, it focuses on rigorous approaches and cutting-edge solutions which break new ground in dealing with the properties of CA and Nature. Its purpose is to make a formal basis more accessible to researchers, scientists, professionals and students as well as developers and practitioners in computer science by providing them with state-of-the-art research results and future opportunities and trends.

Original papers are solicited for the Special Issue. In particular, theoretical contributions should be formally stated and justified, and practical applications should be based on their firm formal basis.

## Topics

Topics of interest include, but are not limited to, the following scope:

| Context-Aware Systems: and Applications: | Natute of Computation and Communication: |
|---|---|
| - Context-aware formal models and methods<br>- Context-aware algorithms and mechanisms<br>- Context-aware properties in mobile systems<br>- Design and performance issues of CA<br>- Tools, testbeds and deployment issues of CA<br>- Real-world applications/implementations and standardization of CA<br>- Socially-inspired, game theoretic and other metaphor-driven interdisciplinary approaches to CA of mobile systems | − Autonomic computing/communicating<br>− Amorphous computing<br>− Biologically-inspired computing/communicating<br>− Cellular automata<br>− Cellular computing<br>− Collective intelligence in computing/communicating<br>− Collision-based computing<br>− Computation/communication based on chaos and dynamical systems<br>− DNA computing<br>− Evolutionary computing<br>− Hypercomputation<br>− Massive parallel computing<br>− Membrane computing<br>− Molecular computing<br>− Neural computing<br>− Optical computing<br>− Physarum computing<br>− Quantum computing<br>− Relativistic computing<br>− Spatial computing<br>− Swam intelligence in computing/communicating<br>− Wetware computing |

## Important Dates

- **Manuscript submission deadline: September 27, 2019**
- Notification of acceptance: November 27, 2019
- Submission of final revised paper: December 27, 2019
- Publication of special issue (tentative): Beginning of 2020

## Submission Procedure

Authors should follow the MONET Journal manuscript format described at the journal site. Manuscripts should be submitted on-line through http://www.editorialmanager.com/mone/.
A copy of the manuscript should also be emailed to the Guest Editor at the following email address pcvinh@ntt.edu.vn

## Guest Editor:

Prof. Phan Cong Vinh
Nguyen Tat Thanh University
300A Nguyen Tat Thanh Street, Ward 13, District 4, Ho Chi Minh City, Vietnam
Email: pcvinh@ntt.edu.vn