

## Call for Paper

# CoMoRea'09 *the challenge*

## 6th Workshop on Context Modeling and Reasoning (CoMoRea'09) – <http://www.nexus.uni-stuttgart.de/COMOREA>

@ 7th Annual IEEE Intl. Conference on Pervasive Computing and Communications,  
Galveston, Texas, March 9-13, 2009

### Important Dates

**Paper submissions:**

October 5, 2008

**Notification:**

December 19, 2008

**Camera ready version:**

January 7, 2009

**Workshop:**

March 9 or 13, 2009

### Workshop Committee

**Workshop co-chairs:**

Jadwiga Indulska,  
The University of Queensland,  
Australia

Daniela Nicklas,  
Carl von Ossietzky Universität  
Oldenburg, Germany

Anand Ranganathan,  
IBM TJ Watson Research Center,  
USA

**Web chair:**

Matthias Wieland,  
Universität Stuttgart, Germany

**Programme committee:**

Jalal Al-Muhtadi, King Saud Uni-  
versity, Saudi Arabia

John Bateman, Bremen University,  
Germany

Martin Bauer, NEC Heidelberg,  
Germany

Oliver Brdiczka, Palo Alto Re-  
search Center, USA

Waltenegous Dargie,  
Technical University of Dresden,  
Germany

Karen Henriksen, Australia

Ghita Kouadri Mostefaoui, Oxford  
University Computing Laboratory,  
UK

Daniele Riboni, University of Milan,  
Italy

Ricky Robinson, NICTA,  
Australia

Gregor Schiele, Universität Mann-  
heim, Germany

Daqing Zhang, Institut National des  
Télécommunications, France

### Workshop Scope

There is a growing interest in context-aware applications that intelligently support user tasks by acting autonomously on behalf of users. Behavior of context-aware applications depends not only on their internal state and user interactions but also on the context sensed during their execution. Some early models of context information already exist, however many research issues related to context information modeling are still not fully addressed. Existing context models vary in types of context information they can represent. While some models take the user's current situation, e.g. "in a meeting", into account others model the physical environment, i.e. locations. A more generic approach to context modeling is needed in order to capture various features of context information including a variety of types of context information, dependencies between context information, quality of context information and context histories. In addition, to ease software engineering problems encountered in programming context-aware applications, appropriate abstractions are necessary to support discovery and reuse of context information as well as scalable methods of context processing and management.

This workshop's aim is to advance the state of the art in context modeling and reasoning and also discuss fundamental issues in context processing and management. The goal is to identify concepts, theories and methods applicable to context modeling and context reasoning as well as system-oriented issues related to the design and implementation of context-aware systems.

### The Challenge

CoMoRea will provide a forum for researchers to present and discuss recent research results and ongoing work. To further foster exchange of experiences and collaboration among researchers, this year's workshop contains a novelty: the challenge. It is a common scenario that we ask researchers to apply their research on.

The scenario can be found in Marc Weisers pioneering article, "The Computer for the 21st Century", online available at <http://www.ubiq.com/hypertext/weiser/SciAmDraft3.html>.

It starts with "Sal awakens: she smells coffee." and ends with "Sal is glad Mary did not make the biography available only during the time of the meeting, as many people do...".

When you apply your work to that scenario, you should give a sense of how your context model or your context-aware framework/middleware/toolkit can support this scenario. This can involve listing the development tasks, describing the software engineering lifecycle, if any, and specifying any other modeling, configuration or installation efforts required.

Note that we are not asking you to actually build a system. Instead, we are essentially asking you to submit a technical proposal stating why your model/system is a good for supporting this scenario. If we like your proposal, we may consider funding you to implement it. This proposal can include information about the following criteria (if applicable):

1. Knowledge Engineering Effort: amount of time it took to specify the contexts and the rules
2. Flexibility: how easily can we change the conditions, add a new context, and respond to a change scenario?
3. Usability of your modeling/framework from an application developer perspective
4. Software Engineering Effort: how many different components, how many LOC (lines of context description)?
5. Expressiveness: can I specify some fairly complex conditions?
6. Does the system deals with uncertainty? Does the user get feedback about context quality and resulting service quality?
7. Does your system perform any kind of consistency checking?

In addition, we encourage you to provide some sample context model files (e.g., OWL files or Prolog rules or in any other format). Also, for this scenario, we are not concerned with the details of context-sensing. Please assume that appropriate “low-level” contexts can be sensed. What we are most interested in is how you would use these “low-level” contexts in supporting the scenario.

We also encourage you to be creative in interpreting this scenario and really showcasing how your favorite model/system can do wonders. At the same time, we would like to make the process interactive (just as it would be in a real software development project). Potential authors are encouraged to get in touch with the organizers with any questions on the scenario or on what is expected from them.

We will determine the “winner” of the challenge under all accepted papers during the workshop. We will ask each group of authors to judge the other submissions based on given evaluation criteria (including, but not limited to the ones above). The winner is given a certificate and will be honored on the CoMoRea webpage.

### **Important Note**

Submissions are not limited to work that is applied to the scenario. However, quality papers that target the scenario of the challenge will be favored.

In general, the following topics are of interest to this workshop:

- Context modeling techniques
- Domain-specific context models
- Ontology-based approaches to context modeling and reasoning
- Hybrid context models (integration of various modeling techniques)
- Advanced issues in context modeling, including issues of information quality and ambiguity
- Context reasoning algorithms, their complexity and accuracy
- Discovery and reuse of context information
- Privacy of context information
- Distributed and scalable context management
- Experiences with using context models to build context-aware applications
- Tool support for context modeling and development of context model-based applications
- Balance of autonomy with user control

### **Submissions**

Submitted papers will be refereed by the workshop Program Committee. Accepted papers will appear in the PerCom’09 Workshops proceedings published by IEEE Computer Society Press.

The papers should be in the IEEE format and should be no more than 5 pages in length. Research papers must be an original unpublished work and not under review elsewhere. Experience reports must be stated as such and a comprehensive discussion of the taken approach, experiences, and its assessment is expected. While submitting, the authors should clearly state whether they target the challenge or not. Papers should be submitted via the EasyChair CoMoRea page:

<http://www.easychair.org/conferences/?conf=comorea09>