

# Workshop on User-Centric Pervasive Adaptation (UCPA 2009)

Berlin, Germany April 27, 2009

Held at MOBILWARE 2009  
([www.mobilware.org](http://www.mobilware.org))

**EXTENDED PAPER SUBMISSION DEADLINE: February 27, 2009**

## Call for Papers

We are currently standing on the brink of a new era of computing systems: Moving on from desktop computers, computing intelligence will be woven into the “fabric of everyday life”, seamlessly and near-invisibly pervading our environment and delivering services adapted to ourselves and our context of use.

One of the key aspects of such user-centric pervasive-adaptive systems is their ability to sense and react to the user's mood and intentions. Different aspects are taken into account: emotional state (e.g. annoyance), cognitive engagement (e.g. high mental workload), and physical conditions and actions (e.g. temperature and movement). The combination of these features together with recognizable human behavioural patterns form the personal awareness of the system. Additionally, information about the surroundings is gathered and used to establish environmental awareness. Considering this, the overall goal is to create systems that are able to derive, suggest and perform actions to optimize user comfort and performance, assisting people in their specific activities and situations (for example driving a car or at work).

In order to find ways of realizing the intended kind of user-centric pervasive adaptivity, several issues have to be addressed that require research in different disciplines, most prominently psychology, interaction design and computer science. To begin with, psychology has to provide methods to sense, analyse and influence the psycho-physiological state of the system's users. These results could then be taken into account to optimize the design of interactions between the user and the system. The main concern of computer science is to establish a basis that allows autonomous computer systems to interpret the acquired sensor data and make reasonable decisions about which adaptation steps to conduct. Besides this, the complexity of pervasive adaptivity calls for novel software engineering approaches and architectures that are able to support the development process by addressing the special dynamic properties of the aspired systems.

The goal of this workshop is to bring together researchers from different fields of expertise, lead to a better understanding between them, and to promote interaction in this new and interdisciplinary area. All in all, we want to create an opportunity for the participants to exchange about a wide range of topics related to pervasive adaptation and “awareness of the user”, covering theoretical aspects as well as practical methods, concrete applications, system architectures or use cases.

Examples of topics include, but are not limited to:

- User-centric adaptive software
- Architecture and infrastructure of pervasive adaptive systems
- Middleware for pervasive adaptive systems
- Pervasive applications that focus on the physical, emotional and cognitive experience

- Methods to sense, analyze and influence the psycho-physiological state of the user
- Algorithms for data processing, learning and reasoning
- Design of user interfaces for pervasive adaptive applications
- User centric adaptivity in mobile systems and applications
- Formal notations and methods for modelling adaptation

## Workshop Format

The workshop will consist both of a short presentation and a discussion part. It will have two or three sessions, each session including five to six papers. For each paper in a particular session, the presenting author will have a maximum of five minutes to summarise the main points. After these short pitches, there will be half an hour when all authors of the current session will be given a different part of the room to present their work using a poster or a laptop demonstration, and discuss with the audience. The idea is to maximise interaction between the participants. One session is scheduled to be 90 minutes in length. The total workshop duration will be half a day.

## Important Dates

Submission Deadline (**extended!**): February 27, 2009

Notification of Acceptance: March 6, 2009

Deadline for Camera Ready Copy: March 20, 2009

Workshop Date: April 27, 2009

## Workshop Organisers

Nikola Serbedzija, Fraunhofer FIRST, Germany

Martin Wirsing, LMU Munich, Germany

## Programme Committee

Alois Ferscha, Johannes Kepler Universität Linz, Austria

Andreas Schroeder, LMU Munich, Germany

Nikola Serbedzija, Fraunhofer FIRST, Germany

Mladen Stanojevic, IMP, Serbia

Martin Wirsing, LMU Munich, Germany

Franco Zambonelli, Università di Modena e Reggio Emilia, Italy

## Paper Submissions Details

All submitted papers should be at most 6 pages in length and prepared using the 1-column LNICST format. Papers will be reviewed by at least three members of the workshop Programme Committee. All accepted papers will be published as part of the MOBILWARE 2009 conference proceedings (ICST Lecture Notes). At least one author of an accepted paper has to register for the workshop. Paper submission and registration for the workshop will be handled electronically via the MOBILWARE website (see <http://www.mobilware.org/submission.shtml>).

<b>Workshop Website:</b> <a href="http://ucpa2009.pst.ifi.lmu.de">http://ucpa2009.pst.ifi.lmu.de</a>
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