

5th International Workshop on the Reliability of Intelligent Environments (WoRIE'16)

<http://www.ugr.es/~worie/2016/>

to be held within



IMPORTANT DATES

- Paper submission deadline: **23 May 2016 (extended)**
- Notification of acceptance: 10 June 2016
- Final version submission: 20 June 2016
- Workshop date: 12 or 13 September 2016

MOTIVATION

Intelligent Environments (IEs) and Ambient Intelligence (Aml) systems are rising as ones of the technical fields with the highest potential to make an impact in daily human life during the near future. Developments in these areas are achieved by a complex juxtaposition of complex technical fields: Software engineering, sensors/actuators, networks for data transportation, and human-computer interactions, among others. Many of these elements are error prone: Software is notoriously difficult, and even companies like NASA, Microsoft, Intel, and BMW, which can afford powerful teams of experienced development teams, have paid with both reputation and economic losses, and even with human lives, the fact of not being able to detect certain software bugs within their products; sensors are often unreliable; networks are sometimes unstable and users can put systems to the test in circumstances that were not initially foreseen. Developing this type of systems is therefore complex.

Moreover, some of such systems will be given the tremendous responsibility to take care of humans. Think for example on how much interest there is on the development of systems to support independent living. These systems are intended to give peace of mind to elderly people and their relatives, trusting that the system will be able to do many things for them, including safety related issues, like detecting whether the occupant of the house has fallen or is unwell in some way. Other system examples are unmanned cars and other autonomous systems that are supposed to perform tasks for us, which can have disastrous consequences if something goes wrong.

Consequently, our community should develop appropriate standards and specific methodologies to ensure we do our outmost to deliver safe systems given the current state of the art. Given the specific blend of components in our area of development, we cannot just transfer developments in other areas (although, of course, they should be taken into account to inform the process). This event will aim to bring together developers and researchers to focus on all aspects of the development process that can contribute to make IEs and Aml systems safer and to provide methodologies that can increase the confidence in these developments. To achieve this, some isolated proposals have started to appear recently, but the seriousness of the topic deserves a more thorough and unified approach from our community.

TOPICS

Areas of interest include, but are not limited to, the following ones, all of them applied to increase the reliability of IEs and related systems (such as Ambient Intelligence systems, Pervasive/Ubiquitous Computing systems, Smart Environments, Multi-Agent Systems, etc.):

- Requirement specification
- Elicitation of user requirements
- Modelling notations
- Rule-based modelling
- Integration of modelling and specification
- Workflow modelling
- Simulation
- Formal analysis and design
- Human-centred design
- Software engineering techniques
- Testing
- Validation
- Formal and semi-formal methods
- Verification of system correctness
- Model checking
- Combination of verification methods
- Quality assessment
- Technical frameworks
- Support tools
- Applications and case studies

PUBLICATION

All accepted papers will be published in an **Open Access** volume in the *Book Series on Ambient Intelligence and Smart Environments Series* (IOS Press). As of 2015, the Workshops Proceedings published by this Book Series are **indexed** in the *Conference Proceedings Citation Index - Science (CPCI-S)* by Thomson Reuters. Previous editions were indexed by Scopus.

Moreover, we will determine the subject and topics of a *special issue* in the *Journal of Reliable Intelligent Environments* (<http://www.springer.com/computer/hardware/journal/40860>) during the workshop. Although this special issue will have an open call, extended versions of papers presented in the workshop will be welcome.

SUBMISSIONS

Authors wishing to participate in this event should:

- (1) Format their papers according to the IOS Press style, with a length of at least 6 but no more than 10 pages. Latex and Word templates can be found in <http://www.iospress.nl/service/authors/latex-and-word-tools-for-book-authors/>.
- (2) Submit the papers using the CMT account for this workshop (<https://cmt3.research.microsoft.com/WORIE2016>). See more details on this from the web page of the workshop.

All submitted papers will be reviewed by several reviewers with expertise in the area in order to provide constructive feedback to their authors and select the best ones for their presentation in the workshop and their publication in the proceedings.

WORKSHOP FORMAT

The core of the event will be the presentation of recent advances in research and applications followed by a debate aiming to encourage a critical reflection on the subject. Presentations can also contain demos about tools and applications.

After the presentations of the selected papers, a panel will focus on critical issues that should be addressed at both academic and professional level. The results of this panel can be used then by different groups to elaborate a summary document on achievements and prospective issues to be considered by the research community. Interaction will be encouraged throughout the event.

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