

# Preface

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## 1. This thematic issue

This issue of JAISE looks at the applications of Computer Vision to the field of Ambient Intelligence (AmI). This is a very relevant topic as it examines the potential that cameras bring to our area. There are a few important implications for AmI in the state of research and advances in the field of computer vision. On the one hand, cameras are arguably the most information-rich sensors available and can provide detailed information about the environment, people, and events. Access to such information often yields a fascinating set of opportunities and challenges both for research and development efforts. The richness of the information offered by cameras provides a more sophisticated reading of a place, much more alike the one a human witness will have in that particular environment. This technology can potentially provide a more holistic and accurate understanding of what is happening in a specific environment and its evolution in time than if, say we use a collection of sensors which only monitor one substance or parameter (e.g., pressure pad, RFID or PIR).

On the other hand, this richness however comes at a price as that often translates to a more complex processing operation and a need to develop a customized approach to understanding what events or activities are taking place in an environment. While price may be considered as a crucial factor when planning a scalable camera network that covers an entire building, the decision to adopt a camera system also involves comparing the cost/benefit factors against installing an array of simpler and cheaper sensors which may provide a subset of the information a camera network can furnish. Especially sensitive for some environments and

applications is the issue of privacy given that cameras can provide such a faithful portrait of what is happening, their presence may trigger anxiety on some people when they are considered as part of a technological deployment where privacy is important (e.g., house monitoring). A combination of a compelling value proposition (such as an accident detection function) and an established trust metric is often a prerequisite to the acceptance of cameras by users.

For all these reasons, Computer Vision will continue to trigger debate in our community while challenging system and algorithm designers in creating compelling solutions. The search will continue for product ideas and usage models that can offer a sensible compromise between the values and sensitivities. This Thematic Issue is therefore a very timely and important contribution to that debate and we are very pleased that experienced professionals in this field have produced such a well-rounded content.

Supplementing the technical material, with this issue we continue our section on Book Reviews. Egon van den Broek provides another review for this series.

We also include in this issue a report on the Best Paper Prize awarded during PH'11.

## 2. Upcoming issues

The next issue (October) will be a regular issue. The next Thematic Issue will be focused on *Virtual and Mixed Reality Intelligent Environments*. The next Thematic Issue planned is on *A Software Engineering Perspective on Smart Applications for AmI*; see <http://people.cs.kuleuven.be/davy.preuveneers/jaise/> for more details.