

# Preface

The annual Ambient Intelligence conference is the prime venue for research on ambient intelligence, with an international and interdisciplinary character. It brings together researchers from the fields of science, engineering, and, design working toward the vision of ambient intelligence.

Volume 8850 of Springer's LNCS series is the formal proceedings of the 11th event in the Ambient Intelligence series, an event that took place in Eindhoven, the place where the conference first started in 2003 as a European Symposium on Ambient Intelligence. The return of the conference to its birthplace is not a superficial coincidence. It reflects the need for this conference and the community of researchers it serves to define their own identity and direction for the future, and the realization that while much of the original ambitions for this research field have been realized a lot remains still to be done.

Since the emergence of ambient intelligence as a vision on consumer electronics, telecommunications, and computing technologies for the time frame 2010–2020 much has changed. The original conceptions of the field discussed, e.g., by Harwig and Aarts<sup>1</sup> still drive current developments.” Researchers are still working towards embedding technology in the environment, supporting context awareness, personalization, and adaptivity of ambient intelligence technologies, and even adapting system behavior autonomously to meet user's needs. These ambitions take new meaning and a higher complexity nowadays as they pertain to more numerous, miniaturized, and complex devices than foreseen in the early days of the field. On the other hand, early scenarios of ambient intelligence, as for example those of the ISTAG advisory group which Europeans researched for more than a decade, are starting to reach the consumer market and to become a part of our daily lives. As ambient intelligence is applied in different application domains and new themes arise for the field, it became necessary to explore in-depth some of the most vibrant areas of research in ambient intelligence.

In 2014, the AmI conference was thus organized along a set of thematic tracks, which cover current areas of research in ambient intelligence. These tracks were led by each of the editors of this volume, who recruited specialized reviewers. Track chairs proposed rankings of articles which were merged in a process moderated by the program chairs of the conference. The tracks for AmI 2014 are the following:

- Ambient Assisted Living
- Internet of Things
- Ambient Play and Learning
- Smart Buildings and Cities
- Intelligent Driving
- Data Science

---

<sup>1</sup> Harwig, R., & Aarts, E. (2002). Ambient intelligence: invisible electronics emerging. In *Interconnect Technology Conference, 2002. Proceedings of the IEEE 2002 International* (pp. 3–5). IEEE.

- Smart Healthcare and Healing Environments
- Ambient Persuasion
- New and Emerging Themes

Full and short papers were reviewed in a single review process, where reviewers were advised to adjust their expectations on completeness of the work and the contribution expected from each paper to its length. Each paper was reviewed by at least two reviewers, and the median number of reviews was 3. On the basis of this review, a ranking was made and a selection of the papers suitable for inclusion in the proceedings and for presentation at the conference resulted in accepting 26 out of the 59 papers submitted (acceptance rate 46 %).

We hope that this collaborative effort has resulted in a rewarding volume that captures current trends and evolving themes in this field, and helps as a reference point for researchers, students, and industry.

We wish to thank all authors for contributing their work, and the reviewers for the effort they have put in the selection process and in providing feedback to help authors improve the presentation of their work.

October 2014

Emile Aarts  
Boris de Ruyter  
Panos Markopoulos  
Evert van Loenen

Ambient Intelligence

European Conference, Aml 2014, Eindhoven, The Netherlands, November 11-13, 2014. Revised Selected Papers

Aarts, E.; De Ruyter, B.; Markopoulos, P.; van Loenen, E.; Wichert, R.; Schouten, B.; Terken, J.; Van Kranenburg, R.; Den Ouden, E.; O'Hare, G. (Eds.)

2014, XIII, 346 p. 144 illus., Softcover

ISBN: 978-3-319-14111-4