

# 4<sup>th</sup> Workshop on Context-Awareness in Retrieval and Recommendation

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**Abstract.** Context-aware information is widely available in various ways and is becoming more and more important for enhancing retrieval performance and recommendation results. The current main issue to cope with is not only recommending or retrieving the most relevant items and content, but defining them ad hoc. Other relevant issues include personalizing and adapting the information and the way it is displayed to the user's current situation and interests. Ubiquitous computing further provides new means for capturing user feedback on items and providing information.

## 1 Introduction

The first CaRR Workshop [7] received enthusiastic feedback from the context-awareness community with a total of 15 submitted papers and more than 30 attendees at IUI 2011 in Palo Alto. A total of 9 papers were accepted for presentation at the workshop and publication in the proceedings [1]. An indication that *context-awareness in retrieval and recommendation* is a very interesting and timely topic. Among the issues discussed at the workshop were: how context-awareness has changed the goal of retrieval and recommendation, e.g. drifting from recommendations that fit to the general user interest to ad-hoc recommendations that fit to the user's context. Additional topics covered were new emerging areas where the role of retrieval and recommendation increases, e.g. recommending places to go, activities to take, or apps to use. The second time the workshop was organized, in conjunction with IUI 2012 in Lisbon, Portugal on February 14 2012 [2,6]. It received very positive feedback from the context-awareness community with a total of 10 submitted papers and more than 30 attendees. The topics covered in the workshop were discussing the roles of context in information retrieval and recommendations a choice and decision making perspective. Different work was presenting the use of context with techniques for personalization and recommendation of items. The use of context in music retrieval and user modeling was also discussed. The third edition of the CaRR

Workshop [3,5] took place in Rome, Italy on February 5, 2013 and continued focusing on the integration of context for retrieval and recommendation. There were a total of 12 submissions, out of which 5 were accepted for publication. The most recent edition of the workshop<sup>1</sup> was organized in conjunction to ECIR 2014 in Amsterdam, The Netherlands in February 2014. The workshop focused on context-awareness in information retrieval and web search systems.

The aim of the CaRR Workshop was to invite the community to a discussion in which we tried to find new creative ways to handle context-awareness. Furthermore, the workshop aimed at exchanging new ideas between different communities involved in research, such as HCI, machine learning, Web mining, information retrieval and recommender systems.

The proceedings of the workshop have been published in the ACM DL in the International Conference Proceedings Series [4].

## 2 Research Questions

The workshop was especially intended for researchers working on multidisciplinary tasks, to discuss problems and synergies. Ideas on creative and collaborative approaches for context-aware retrieval and recommendation were of special interest.

The participants were encouraged to address the following questions:

- What is context?
- Which benefits come from context-aware systems?
- In what ways can context improve the Web experience?
- How can we combine general- and user-centric context-aware technologies?
- How should context affect the way information is presented?

## 3 Topics

The topics of interest included, but were not limited to:

- Context-aware data mining and information retrieval
- Context-aware profiling, clustering and collaborative filtering
- Use of context-aware technologies in Web search
- Ubiquitous and context-aware computing
- Use of context-aware technologies in UI/HCI
- Context-aware advertising
- Recommendations for mobile users
- Context-awareness in portable devices
- Mobile and social search

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<sup>1</sup> <http://carr-workshop.org>

## 4 Workshop Organizers

**Alan Said** is a postdoctoral research fellow at Centrum Wiskunde & Informatica (CWI), Amsterdam, The Netherlands. His research interests are related to evaluation of information systems. He has authored papers on national and international conferences in the fields of recommender systems, evaluation, social networks, context-awareness and other related areas. He has also chaired workshops and conferences on recommender systems and related topics.

**Ernesto William De Luca** is professor of information science at the Potsdam University of Applied Sciences. He is the author of more than 70 papers on national and international conferences and journals in the fields of Computational Linguistics, Information Retrieval, Adaptive Systems and other related areas. He has chaired a number of workshops on semantic personalization, context-awareness in recommender systems and related topics.

**Daniele Quercia** is a social media researcher at Yahoo Labs in Barcelona. Before that, he was a Horizon senior researcher at The Computer Laboratory of the University of Cambridge. He is interested in the relationship between online and offline worlds and his work has been focusing in the areas of data mining, recommender systems, computational social science, and urban informatics. He was Postdoctoral Associate at the Massachusetts Institute of Technology where he worked on social networks in a city context, and his PhD thesis at UC London was nominated for BCS Best British PhD dissertation in Computer Science.

**Matthias Böhmer** is a researcher at the Innovative Retail Laboratory of the German Research Center for Artificial Intelligence (DFKI) in Saarbrücken, Germany. His main research focus is understanding and supporting mobile application usage, in particular on context-aware recommender systems that suggest mobile applications. He is interested in deducing the contextual relevance of particular apps from a user's device interaction, e.g. usage patterns or icon arrangement.

## 5 Program Committee Members

- Luca Maria Aiello - Yahoo! Research, Spain
- Omar Alonso - Microsoft, USA
- Nicola Barbieri - Yahoo! Research, Spain
- Alejandro Bellogín, UAM, Spain
- Robin Burke - DePaul University, USA
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- Arjen de Vries - CWI, The Netherlands

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