

Report on the Eighteenth International Conference on Case-Based Reasoning

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■ This article reports on the main track papers, speakers, satellite events, and other activities of the Eighteenth International Conference on Case-Based Reasoning (ICCBR), held 19–22 July 2010 in Alessandria, Italy

The Eighteenth International Conference on Case-Based Reasoning (ICCBR 2010)¹ continued a series of international conferences highlighting the most significant contributions to the field of case-based reasoning (CBR). The International Conference on Case-Based Reasoning (ICCBR) has continuously been the preeminent international meeting on case-based reasoning (CBR). Through 2009, ICCBR had been a biennial conference, held in alternation with its sister conference, the European Conference on Case-Based Reasoning (ECCBR), which was located in Europe. At the 2009 ICCBR, the ICCBR Program Committee elected to extend an offer of consolidation with ECCBR. The offer was accepted by the ECCBR 2010 organizers and they considered it approved by the ECCBR community, as the two conferences shared a majority of Program Committee members. Therefore, starting in 2010, ICCBR and ECCBR are merged in a single conference series, called ICCBR. As there had been eight previous ICCBR events and nine previous ECCBR events, this edition in the combined series is considered the 18th ICCBR. The conference took place from July 19 to July 22, 2010, in the city of Alessandria, Italy, on the beautiful campus of the University of Piemonte Orientale “A. Avogadro.”

Following a well-established tradition, ICCBR 2010 was organized as a four-day conference, centered on a main track,



Figure 1. The Best Paper Award Went To “A General Introspective Reasoning Approach to Web Search for Case Adaptation,” by David Leake and Jay Powell.

preceded by two days of satellite events, which in 2010 included an Applications Track, a Doctoral Consortium, the “Computer Cooking Contest,” and a set of additional workshops. Three of the four days were opened by plenary lectures held by preeminent scientists both from inside and from outside the CBR community. Details of such events, as well as of the main track contributions, will be sketched in the next sections.

The Invited Speakers

This year the conference was proud to present three distinguished invited speakers: Riccardo Bellazzi (University of Pavia, Italy), Amedeo Napoli (LORIA, France), and Ashwin Ram (Georgia Institute of Technology, USA).² Riccardo Bellazzi works in the neighboring areas of computational biology

and medical informatics; he opened the Applications Track with a talk on translational bioinformatics, its challenges and opportunities for CBR, and for decision support systems development. Amedeo Napoli and Ashwin Ram, on the other hand, are insiders of the community, and were asked to kick off the two days of the main conference program. In his talk, Amedeo explained why and how knowledge discovery can be useful for solving problems with CBR. Ashwin presented his innovative ideas on how to use real-time case-based reasoning for interactive digital entertainment.

The Main Track

The main technical program consisted of 18 oral presentations and 17 posters, all included in the



Figure 2. The Computer Cooking Contest.

proceedings published by Springer-Verlag.³ The works spanned from theoretical to applied CBR research and covered a wide range of CBR topics including adaptation, bioinformatics, case mining, case retrieval, computer games, experience on the web, introspective reasoning, knowledge acquisition, knowledge management, knowledge representation, planning, similarity, temporal reasoning, and textual CBR.

In particular, the presentation titled “A General Introspective Reasoning Approach to Web Search for Case Adaptation,” by David Leake and Jay Powell, stood out for its innovation and quality. It introduced a system for acquiring case knowledge, using a knowledge planning process to mine such knowledge as needed from web sources. The system applies introspective reasoning to guide recovery from adaptation failures and reinforcement learning to select the knowledge sources to mine. This paper received the best paper award (see figure 1).

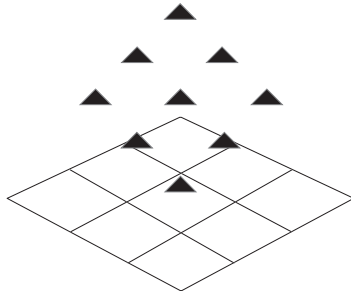
The poster session was very lively, and permitted the presentation of works of high quality, but able to attract the interest of smaller groups of people, rather than of the entire conference audience; it allowed for interactive and in-depth discussions

of research advances in specific areas. Globally speaking, both the oral presentations and the poster contributions at ICCBR 2010 provided a representative snapshot of current CBR research.

The Satellite Events

The satellite events of the conference included an Applications Track, chaired by Jerzy Surma (Warsaw School of Economics, Poland), and the second Doctoral Consortium, organized by Klaus-Dieter Althoff (University of Hildesheim, Germany). The Applications Track featured fielded applications and CBR systems demos in industrial and scientific settings with an emphasis on discussion and networking between researchers and industrials. The second Doctoral Consortium allowed connecting doctoral students with senior researchers from the CBR community to serve as their mentors.

Moreover, five workshops, coordinated by Cindy Marling (Ohio State University, USA), were held and attended by the community in two parallel sessions. The workshop proceedings can be downloaded from the conference site.⁴ In particular, this year the workshops were devoted to “Case-



2013 AAAI Spring Symposium Series

AAAI is currently accepting proposals for the 2013 Spring Symposium Series, to be held at Stanford University, California, March 25–27, 2013.

Approximately eight symposia on a broad range of topics within and around AI will be selected for the 2013 Spring Symposium Series. All proposals will be reviewed by the AAAI Symposium Committee (Chair: Matthew E. Taylor, Lafayette College; Cochair: Gita Sukthankar, University of Central Florida; Alan Schultz, Naval Research Laboratory; and Kate Larson, University of Waterloo).

Symposium proposals should be submitted as soon as possible, but no later than April 20, 2012. The Call for Proposals can be found at www.aaai.org/Symposia/Spring/sss13.php.

Please submit your symposium proposals by electronic mail (no postal submissions), and inquiries concerning symposia, to Matt Taylor, Lafayette College, taylorm@lafayette.edu.

Based Reasoning for Computer Games," "Provenance-Aware CBR: Applications to Reasoning, Metareasoning, Maintenance, and Explanation," "CBR Startups," and "WebCBR: Reasoning from Experiences on the Web." Moreover, the third "Computer Cooking Contest" workshop featuring papers selected for their technical quality, originality of approach, culinary quality, and relevance of the created recipes, was held as well. Such a workshop was followed by the Computer Cooking Contest live competition (figure 2), which showcased intriguing intelligent systems rivaling with humans in the kitchen. Several systems won a prize for their excellence. However the highest prize was won by a French team for their TAAABLE

3 system (Alexandre Blansch  et al., INRIA Lorraine–LORIA, France).

A set of social activities, including a trip to the beautiful city of Stresa on Maggiore Lake, complemented the main activities of the conference.

Notes

1. See www.iccbr.org/iccbr10.
2. Copies of invited talks are available from the 2010 conference website (www.iccbr.org/iccbr10).
3. Proceedings are available from www.springerlink.com/content/978-3-642-14273-4/.
4. Workshop proceedings are available from www.iccbr.org/iccbr10/iccbr_2010_workshops.pdf.

Isabelle Bichindaritz has been an assistant professor in Computer Science at the University of Washington, Institute of Technology, Computing, and Software Systems, in Tacoma, Washington, USA since 2002. She holds a Ph.D. in computer science from the Universit  Ren  Descartes–Paris V (1994). Her research focuses on intelligent learning systems in biology and medicine, with a particular emphasis on case-based reasoning and data mining as well as on biomedical applications of artificial intelligence. She has co-organized five workshops on Case-based Reasoning in the Health Sciences at ICCBR and ECCBR, and three workshops on Data Mining in the Life Sciences, colocated with the Industrial Conferences on Data Mining. Bichindaritz has published more than 90 scientific papers and has edited or coedited special issues of *Artificial Intelligence in Medicine*; *Computational Intelligence*; and *Applied Intelligence, on Case-based Reasoning in the Health Sciences*. Recently, she has coedited a book on computational intelligence in health care.

Stefania Montani (PhD in Bioengineering and Medical Informatics 2001, University of Pavia, Italy) is an assistant professor in computer science at the Computer Science Department of the University of Piemonte Orientale, Alessandria, Italy. Her research interests include case-based reasoning, decision support systems, temporal databases, temporal reasoning, and dependability analysis. She is author of more than 100 publications, all in international journals, books, or international refereed conferences. She is member of more than 10 program committees of international conferences in 2011, and belongs to the reviewing boards of 3 international journals. She has co-organized four workshops on Case-based Reasoning in the Health Sciences at ICCBR and ECCBR and has coedited three journals' special issues of *Artificial Intelligence in Medicine*; *Computational Intelligence*; and *Applied Intelligence, on Case-based Reasoning in the Health Sciences*. She has also coedited a book on case-based reasoning applications.