Report on the 24th International Conference on Case-Based Reasoning Research and Development (ICCBR-2016)

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■ *The 24th International Conference on Case-Based Reasoning Research and Development (ICCBR-2016) was held October 31 to November 2, in Atlanta, Georgia, USA, colocated with the Fourth International Conference on Design and Creativity. ICCBR is the premier, annual meeting of the CBR community and the leading international conference on this topic. This report summarizes the conference.*

Case-based reasoning (CBR) addresses new problems by remembering and adapting solutions previously used to solve similar problems. CBR favors incremental learning from experience and acquisition of expertise rather than exhaustive extraction of domain knowledge. Research on CBR appears to be gaining momentum because of several reasons: new application domains, a closer alliance with research on analogy and creativity, hybrid approaches for the different CBR processes, a renewed interest on textual and conversational systems, management of big case bases, and explanation, transparency, and trust of the reasoning results based on the underlying examples.

The origins of the Conference on Case-Based Reasoning date from the first European workshop on CBR (EWCBR) held in Kaiserslautern, Germany, in 1993. Since then many European and international conferences on CBR have been held in different parts of the world. The European conference on CBR (ECCBR) and the International Conference on CBR (ICCBR) were held in alternating years. The European Conference itself was the continuation of the European Workshop on CBR (EWCBR). In 2010, ICCBR and ECCBR were merged into a single ongoing conference series, called ICCBR, a conference that is held annually. ICCBR has become the premier, annual meeting of the CBR community and the leading international conference on this topic

The 24th International Conference on Case-Based Reasoning (ICCBR 2016) was held October 31 to November 2, in Atlanta, Georgia, USA. It was colocated with the Fourth International Conference on Design and Creativity. ICCBR 2016 attracted about 100 participants from 18 countries. The conference events included two invited speakers, a doctoral consortium, five workshops, and presentation of papers, posters, and awards. The program cochairs were Belén Díaz-Agudo from Complutense University, Spain, and Thomas Roth-Berghofer from University of West London, UK. The conference chair was Ashok K. Goel, from Georgia Institute of Technology, USA.

The conference participants enjoyed invited talks from two distinguished speakers, Pablo Gervás (Complutense University of Madrid, Spain) and Mehmet Goker (vice president, Business Data Science Salesforce, San Francisco, USA). Pablo Gervás's talk, How Creative Can Reuse Be? pointed up CBR as a favored technology for trying to model creative tasks such as story generation or music generation in artificial intelligence. Mehmet Goker gave an applied industry point of view of CBR in his talk The Business End of Data Science.

Sarah Jane Delaney (Dublin Institute of Technology, Ireland) and Stefania Montani (University Piemonte Orientale, Italy) organized the eighth annual ICCBR Doctoral Consortium (DC) that provided 10 PhD students with opportunities to present their ongoing work, explore and obtain mutual feedback on their research, future work plans, and career objectives with senior CBR researchers, practitioners, and peers.

Alexandra Coman (Ohio Northern University, USA) and Stelios Kapetanakis (University of Brighton, UK) coordinated five parallel workshops covering specific and transverse themes with a very active participation from attendees: Computational Analogy, Synergies between CBR and Knowledge Discovery, Reasoning about Time in CBR, Process-Oriented CBR, and Computer Cooking Contest.

The main conference program comprised 31 contributions between presentations and posters from 144 authors on technical and applied CBR papers. The accepted papers were of very high quality, and provided many new insights across a wide range of CBR issues. Topics in recent CBR research included in the presentations and discussions at ICCBR 2016 included novel approaches to similarity and retrieval; advances in adaptation strategies; case generation; representation and knowledge discovery; CBR as a cognitive approach to big data; AI with large-scale memories; cognitive aspects of CBR; maintenance of big case bases; domain independent techniques and tools; hybrid approaches; explanation, transparency, and trust of reasoning results; and successful applications in a wide variety of domains.

The papers from the conference were published by Springer (doi.org/10.1007/978-3-319-47096-2) as part of the Lecture Notes in Computer Science book series (volume 9969). The next ICCBR conference will be held June 2017 in Trondheim, Norway.

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