# The Sixth International Conference on Case-Based Reasoning (ICCBR-05)

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■ The Sixth International Conference on Case-Based Reasoning (ICCBR-05) took place from 23 August through 26 August 2005 at the downtown campus of De-Paul University, in the heart of Chicago's downtown Loop. The conference program included Industry Day, four workshops, and two days of technical paper presentations divided into poster sessions and a single plenary track. This report describes the conference in detail.

The International Conference on Case-Based Reasoning (ICCBR) is the preeminent international meeting on case-based reasoning (CBR). ICCBR 2005[1] is the sixth in this series of biennial international conferences highlighting the most significant contributions to the field of CBR. The conference took place from 23 August through 26 August 2005 at the downtown campus of DePaul University, in the heart of Chicago's downtown Loop. Previous ICCBR conferences have been held in Trondheim, Norway (2003); Vancouver, Canada (2001); Seeon, Germany (1999); Providence, Rhode Island, USA (1997),; and Sesimbra, Portugal (1995). ICCBR 2007 will be held in Belfast, Ireland.

The first day of ICCBR 2005 was In-dustry Day, which provided real-world experiences utilizing CBR in fielded applications. The second day featured four workshops on various CBR related topics: health sciences, textual case-based reasoning, computer gaming and simulation environments, and similarities—processes—work-flows. Days 3 and 4 comprised presentations and posters on theoretical and applied CBR research, as well as invited talks from two distinguished scholars: Derek Bridge, the University College Cork, and Craig Knoblock, the University of Southern California.

ICCBR-05 received 74 paper submissions from 19 countries around the world. Of these, the program committee selected 26 for poster presentations and 19 for oral presentations. The acceptance rate for oral presentations was 25.6 percent, close to the historical average for ICCBR conferences. Each submission was identified as in one of three categories and judged using the following criteria: (1) theoretical/methodological research paper (scientific significance; originality; technical quality; and clarity); (2) applied research paper (significance for scientific research or innovative commercial deployment; originality; technical quality; and clarity); (3) deployed application paper (demonstrated practical, social, environmental, or economic significance; originality; treatment of issues of engineering, management, and user acceptance; and clarity.). The proceedings, published by Springer-Verlag, cover a wide range of CBR topics, including adaptation, applications, case-based maintenance, computer games, creative reasoning, knowledge representation, interactive systems, knowledge management, knowledge acquisition, multiagent collaborative systems, similarity, tutoring systems, bioinformatics, and textual CBR. The program committee selected the paper "Learning to Win: Case-Based Plan Selection in a Real-Time Strategy Game" by David W. Aha (Naval Research Laboratory), Matthew Molineaux (ITT Industries), and Marc Ponsen (University of Maastricht) for the best paper award.

The conference represented also an opportunity for discussing the state of the research in CBR, after the tenth year of the ICCBR conference series, and many more years of case-based reasoning research. A panel discussion pointed out what the community has built and what is still to be achieved. Klaus Dieter Althoff (University of Hildesheim) noted the openness of the community towards other AI areas and the important role of systems and applications development in keeping CBR research interesting for the industrial sector. David Aha noted the need to enhance the theoretical foundations of CBR. Barry Smyth (University College Dublin) stressed the fact that in recent years we have focused on case retrieval and still much work is needed with respect to experience modeling and reuse. Enric Plaza (Spanish Council for Scientific Research) stressed how the CBR field has changed in the last 10 years, has stabilized, but still is not perceived as a mature area. The discussion then suggested new "community building" activities such as to state challenge topics, collect and organize CBR content in a community portal, and promote the organization of CBR workshops in other conferences.

Many people participated in making ICCBR 2005 a success. Robin

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Burke (DePaul University) served as local chair, with Héctor Muñoz-Avila (Lehigh University) and Francesco Ricci (ITC-IRST) as program cochairs. Stefanie Brüninghaus (University of Pittsburgh) served as workshop coordinator, and Mehmet H. Göker (PricewaterhouseCoopers) and Bill Cheetham (GE Research) chaired Industry Day. The workshop on the topic of health sciences was organized by Isabelle Bichindaritz (University of Washington, Tacoma) and Cindy Marling (Ohio University, Athens). The textual CBR workshop was organized by Rosina Weber (Drexel University) and Karl Branting (BAE Systems). The workshop about computer gaming and CBR was organized by David Aha (Naval Research Laboratory) and David Wilson (University of North Carolina, Charlotte), and the workshop on processes and workflows was organized by Michael Richter (University of Kaiserslautern), Harald Holz (DFKI), Rainer Maximini (University of Trier), and Armin Stahl (DFKI).

ICCBR 2005 was supported by the generous contribution of its sponsors: Kaidara, Empolis, the Naval Research Laboratory, and PricewaterhouseCoopers. We would also like to thank Springer-Verlag for its continuing support in publishing the proceedings of ICCBR.

## Note

1. www.iccbr.org/iccbr05/.

**Héctor Muñoz-Avila** is an assistant professor at the Department of Computer Science and Engineering at Lehigh University. Prior to joining Lehigh, Muñoz-Avila worked as a researcher at the Naval Research Laboratory and the University of Maryland at College Park. He received his Ph.D. from the University of Kaiserslautern (Germany). Muñoz-Avila has done extensive research on case-based reasoning, planning, and machine learning, having written more than 10 journal papers and more than 30 refereed conference/workshop papers on the subject. Two of these papers received awards. He is also interested in advancing game AI with AI techniques. He has been chair, program committee member, and a reviewer for various international scientific meetings. He was program cochair of the Sixth International Conference on Case-Based Reasoning (ICCBR-05) held in Chicago, IL (USA).

**Francesco Ricci** is a senior researcher and the technical director of the eCommerce and Tourism Research Lab at ITC-IRST. He received a doctoral degree in mathematics from the University of Padova in 1983. He is a researcher at ITC-IRST, where he is responsible for internal laboratories (Expert System group, knowledge representation). From 1998 to 2000 he worked with Sodalia S.p.A. as a software architect, designing the corporate web application model. His current research interests include recommender systems, constraint satisfaction problems, machine learning, case-based reasoning, and information technologies and tourism. He has chaired national and international conferences (ICCBR 2005, ARS'05, IWCBR98, RPEC'02) and acts as a referee of international journals such as *IEEE PAMI, Machine Learning Journal, IEEE Transaction on Data and Knowledge Engineering, Information Technology and Tourism,* and *Computer Journal* and serves on the editorial board of *Information Technology and Tourism Journal.*

**Robin Burke** is an associate professor at the School of Computer Science, Telecommunications, and Information Systems at DePaul University in Chicago, IL. He also held positions at the University of Chicago, the University of California, Irvine, and California State University, Fullerton after receiving his Ph.D. from Northwestern University's Institute for the Learning Sciences in 1993. Burke has been active in case-based reasoning research since 1989 and was a pioneer in the area of case-based approaches to knowledge-based recommender systems. He is currently in the middle of an NSF-funded project to study the security properties of recommendation algorithms. Burke was the local chair for ICCBR 2005, which was hosted by DePaul University in August 2005.