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Case-Based Reasoning Research and Development

8th International Conference on Case-Based Reasoning, ICCBR 2009 Seattle, WA, USA, July 20-23, 2009 Proceedings

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Preface

The International Conference on Case-Based Reasoning (ICCBR) is the pre-eminent international meeting on case-based reasoning (CBR). ICCBR 2009 (http://www.iccbr.org/iccbbr09/) was the eighth in this series of biennial international conferences highlighting the most significant contributions to the field of CBR. The conference took place during July 20–23, 2009 in Seattle, Washington, USA. Previous ICCBR conferences have been held in Belfast, Northern Ireland, UK (2007), Chicago, USA (2005), Trondheim, Norway (2003), Vancouver, Canada (2001), Seeon, Germany (1999), Providence, Rhode Island, USA (1997), and Sesimbra, Portugal (1995).

Day 1 of the conference hosted an Applications Track and introduced the first ICCBR Doctoral Consortium. The Applications Track focused on real-world examples of the use of CBR in industrial fielded applications and provided a cooperative forum for the cross-fertilization of ideas between academic and industry attendees. The Doctoral Consortium concentrated on providing a supportive atmosphere for early-stage CBR researchers. Participants were matched with mentors, who provided guidance on their research trajectory, as well as advice about writing and presenting their research.

Day 2 featured topical workshops on “Reasoning from Experiences on the Web,” “Case-Based Reasoning for Computer Games,” “Uncertainty, Knowledge Discovery and Similarity in Case-Based Reasoning,” and “CBR in the Health Sciences.” In addition, the second CBR Computer Cooking Contest was held following on from its success at the 9th European Conference on Case-Based Reasoning (ECCBR 2008) held in Trier, Germany. Students and research groups described their entries in terms of the application of case retrieval, adaptation, and combination methods for cooking recipes, and participated in an energetic live demonstrative competition that was enjoyed by all attendees of the conference.

Days 3 and 4 comprised presentations and posters on theoretical and applied CBR research, as well as invited talks from two distinguished researchers: Susan Craw, Director of the Research Institute for Innovation, Design And Sustainability (IDEAS) at the Robert Gordon University, and Edwina L. Rissland from the Department of Computer Science at the University of Massachusetts at Amherst. The presentations and posters covered a wide range of CBR topics of interest both to practitioners and researchers, including: textual CBR, reinforcement learning, biologically inspired CBR, Web search and CBR, case-based recommender systems, CBR tools and system design, CBR quality management, case library maintenance, case-based planning, case representation, case similarity and retrieval, multi-dimensional indexing, spatial prediction, case-based decision analysis, automatic case generation, temporal CBR, active learning, real-time CBR, games and simulations, legal reasoning, ambient intelligence, evaluation
methodology, case adaptation, hybrid AI systems, collective classification, video understanding, multi-agent collaborative systems, machine learning.

This volume comprises papers of all the presentations and posters. These 34 papers were selected from a total of 55 submissions; 17 papers for oral presentation and 17 papers for poster presentation. Each paper was reviewed by at least three Program Committee members and revised in line with the constructive feedback provided. The papers in this volume provide a representative snapshot of current CBR research. We have organized the proceedings into three categories: Invited Talks (2 short papers), Theoretical/Methodological Research Papers (25 papers), and Applied Research Papers (9 papers).

Many people participated in making ICCBR 2009 a success. Local Conference Chair Isabelle Bichindaritz, from the University of Washington at Tacoma, devoted a great deal of her time to organizing the local arrangements and liaising with our sponsors. Everything from the room arrangements to the conference banquet was handled by Isabelle, and for this we are very grateful. Also, special thanks to Bill Cheetham and Kareem Aggour our Applications Track Chairs, Susan Fox for organizing the Doctoral Consortium, and Mirjam Minor, David Leake, and Armin Stahl for arranging and over-seeing the second CBR Cooking Contest. We appreciate the sterling work of Workshop Coordinator Sarah Jane Delany and all the chairs of the respective workshops and their various committee members. Sincere thanks to the Program Committee and the additional reviewers for their co-operation during the paper review process. In addition, we would like to thank our invited speakers, all of the authors who submitted papers to the conference, and gratefully acknowledge the generous support of our sponsors.

Finally, we would like to express our gratitude to the previous ICCBR and ECCBR conference organizers who gave us very valued advice, and to Springer for its continued support with respect to publishing this series of conference proceedings.

July 2009

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# Table of Contents

## Invited Talks

We’re Wiser Together .................................................. 1  
*Susan Craw*

Black Swans, Gray Cygnets and Other Rare Birds ................. 6  
*Edwina L. Rissland*

## Theoretical/Methodological Research Papers

Case Retrieval Reuse Net (CR2N): An Architecture for Reuse of  
Textual Solutions .......................................................... 14  
*Ibrahim Adeyanju, Nirmalie Wiratunga, Robert Lothian,  
Somayajulu Sripada, and Luc Lamontagne*

Case-Based Reasoning in Transfer Learning ....................... 29  
*David W. Aha, Matthew Molineaux, and Gita Sukthankar*

Toward Modeling and Teaching Legal Case-Based Adaptation with  
Expert Examples .......................................................... 45  
*Kevin Ashley, Collin Lynch, Niels Pinkwart, and Vincent Aleven*

Opportunistic Adaptation Knowledge Discovery ................. 60  
*Fadi Badra, Amélie Cordier, and Jean Lieber*

Improving Reinforcement Learning by Using Case Based Heuristics. 75  
*Reinaldo A.C. Bianchi, Raquel Ros, and Ramon Lopez de Mantaras*

Dimensions of Case-Based Reasoner Quality Management ........ 90  
*Annett Bierer and Marcus Hofmann*

Belief Merging-Based Case Combination .................. 105  
*Julien Cojan and Jean Lieber*

Maintenance by a Committee of Experts: The MACE Approach to  
Case-Base Maintenance .................................................. 120  
*Lisa Cummins and Derek Bridge*

The Good, the Bad and the Incorrectly Classified: Profiling Cases for  
Case-Base Editing ....................................................... 135  
*Sarah Jane Delany*

An Active Approach to Automatic Case Generation ............ 150  
*Michael W. Floyd and Babak Esfandiari*
Four Heads Are Better than One: Combining Suggestions for Case Adaptation ........................................ 165
  David Leake and Joseph Kendall-Morwick

Adaptation versus Retrieval Trade-Off Revisited: An Analysis of Boundary Conditions ........................................ 180
  Stephen Lee-Urban and Héctor Muñoz-Avila

Boosting CBR Agents with Genetic Algorithms ...................... 195
  Beatriz López, Carles Pous, Albert Pla, and Pablo Gay

Using Meta-reasoning to Improve the Performance of Case-Based Planning ................................................ 210
  Manish Mehta, Santiago Ontañón, and Ashwin Ram

Multi-level Abstractions and Multi-dimensional Retrieval of Cases with Time Series Features .............................. 225
  Stefania Montani, Alessio Bottrighi, Giorgio Leonardi, Luigi Portinale, and Paolo Terenziani

On Similarity Measures Based on a Refinement Lattice ............ 240
  Santiago Ontañón and Enric Plaza

An Overview of the Deterministic Dynamic Associative Memory (DDAM) Model for Case Representation and Retrieval .......... 256
  Stefan Pantazi

Robust Measures of Complexity in TCBR ............................ 270
  M.A. Raghunandan, Sutanu Chakraborti, and Deepak Khemani

S-Learning: A Model-Free, Case-Based Algorithm for Robot Learning and Control ....................................... 285
  Brandon Rohrer

Quality Enhancement Based on Reinforcement Learning and Feature Weighting for a Critiquing-Based Recommender ............ 298
  Maria Salamó, Sergio Escalera, and Petia Radeva

Abstraction in Knowledge-Rich Models for Case-Based Planning .... 313
  Antonio A. Sánchez-Ruiz, Pedro A. González-Calero, and Belén Díaz-Agudo

A Scalable Noise Reduction Technique for Large Case-Based Systems ... 328
  Nicola Segata, Enrico Blanzieri, and Pádraig Cunningham

Conceptual Neighborhoods for Retrieval in Case-Based Reasoning .... 343
  Ben G. Weber and Michael Mateas

CBR Supports Decision Analysis with Uncertainty .................. 358
  Ning Xiong and Peter Funk
## Applied Research Papers

A Value Supplementation Method for Case Bases with Incomplete Information ......................................................... 389  
Kerstin Bach, Meike Reichle, and Klaus-Dieter Althoff

Efficiently Implementing Episodic Memory .................................................. 403  
Nate Derbinsky and John E. Laird

Integration of a Methodology for Cluster-Based Retrieval in jColibri .... 418  
Albert Fornells, Juan Antonio Recio-García, Belén Díaz-Agudo,  
Elisabet Golobardes, and Eduard Fornells

Case-Based Collective Inference for Maritime Object Classification .... 434  
Kalyan Moy Gupta, David W. Aha, and Philip Moore

Case-Based Reasoning for Situation-Aware Ambient Intelligence:  
A Hospital Ward Evaluation Study ......................................................... 450  
Anders Kofod-Petersen and Agnar Aamodt

Spatial Event Prediction by Combining Value Function Approximation and Case-Based Reasoning ........................................ 465  
Hua Li, Héctor Muñoz-Avila, Diane Bramsen, Chad Hogg, and  
Rafael Alonso

Case-Based Support for Forestry Decisions: How to See the Wood from the Trees .............................................................. 479  
Conor Nugent, Derek Bridge, Glen Murphy, and Bernt-Håvard Øyen

A Case-Based Perspective on Social Web Search ............................. 494  
Barry Smyth, Peter Briggs, Maurice Coyle, and  
Michael P. O’Mahony

Determining Root Causes of Drilling Problems by Combining Cases and General Knowledge ........................................... 509  
Samad Valipour Shokouhi, Agnar Aamodt, Pål Skalle, and  
Frode Sørmo

Author Index ......................................................................................... 525