The Eighteenth International Conference on Case-Based Reasoning

ICCBR-10

Program of Events

University of Piemonte Orientale

Alessandria, Italy

July 19-22, 2010

Monday – 19 July 2010

08:30 Registration (Front of Aula Magna)

09:00 Welcome & Orientation (Aula Magna)

09:15 **Invited Talk** (Aula Magna) – Translational Bioinformatics: Challenges and Opportunities for Case-Based Reasoning and Decision Support
Professor Riccardo Bellazzi

10:15 Coffee break

10:30 Applications Track I / Computer Cooking Contest Workshop

Applications Track I (Aula Magna)
Chair Professor Jerzy Surma

10:30 – jCOLIBRI CBR Framework
Juan A. Recio García
11:00 – DrillEdge - case-based reasoning application for monitoring and knowledge management in oil well drilling
Frode Sørmo, Odd Erik Gundersen
11:30 – Flexible genome retrieval for supporting in-silico studies of endobacteria-AMFs
Stefania Montani, G. Leonardi, S. Ghignone, L. Lanfranco
12:00 – Bayesian Model Averaging for Case-based Reasoning in Bioinformatics
Isabelle Bichindaritz

Computer Cooking Contest Workshop (Aula 101)
Chair Professors Amélie Cordier and David Aha

10:30 – Introduction
10:45 – Approximating Knowledge of Cooking in High-Order Functions, A Case Study of Froglingo
Kevin H. Xu, Jingsong Zhang and Shelby Gao
11:00 – JADAWeb: A CBR System for Cooking Recipes
Miguel Ballesteros, Raul Martin and Belen Díaz-Agudo
11:15 – Adaptation of Cooking Instructions Following the Workflow Paradigm
Mirjam Minor, Ralph Bergmann, Sebastian Görg and Kirstin Walter
11:30 – TAAABLE 3: Adaptation of Ingredient Quantities and of Textual Preparations
Alexandre Blanché, Julien Cojan, Valmi Dufour-Lussier, Jean Lieber, Pascal Molli, Emmanuel Nauer, Hala Skaf-Molli and Yannick Toussaint
11:45 – On-Demand Recipe Processing Based on CBR
Régis Newo, Kerstin Bach, Alexandre Hanft and Klaus-Dieter Althoff
12:00 – Evaluation and Discussion

12:30 Lunch break

13:30 Applications Track II / Doctoral Consortium

Applications Track II (Aula Magna)
Chair Professor Jerzy Surma

13:30 – Strategos - CBR in Small and Medium Enterprises
     Jerzy Surma
14:00 – A Case-based Approach to Business Process Monitoring
     Stefania Montani, Georgio Leonardi
14:30 – Discussion

Doctoral Consortium (Aula 101)
Chair Professor Klaus-Dieter Althoff

13:30 – Personal discussion of each PhD student with their respective mentor
13:55 – Case-based plan diversity
     Alexandra Coman
14:20 – Different strategies to learning case adaptation knowledge in classification problems
     Mikhail Kalinkin
14:45 – Knowledge-intensive case based classification applied in medical diagnosis
     Abdeldjalil Khelassi

15:30   Coffee break

15:45   **Computer Cooking Contest Finale**

17:15   End of Sessions

18:00   **Welcome Reception** (Palazzo Monferrato)

Tuesday – 20 July 2010

08:30   Registration (Front of Aula Magna)

09:00   **Workshop Session I**

CBR for Computer Games Workshop (Aula 101)
Chair Professors Manish Mehta, Santiago Ontañón, and Antonio A. Sánchez-Ruiz

9:15 – Introduction and Goals of the Workshop
9:30 – Invited Talk: Artificial Intelligence for Games: Challenges and Opportunities
    Pedro A. Gonzalez Calero
10:10 – Using Automated Replay Annotation for Case-Based Planning in Games
    Ben Weber and Santiago Ontañón

Reasoning from Experiences on the Web Workshop (Aula 102)
Chair Professors Derek Bridge, Sarah Jane Delany, Enric Plaza, Barry Smyth, and Nirmalie Wiratunga

9:15 – Welcome
9:20 – Overview of Experience Web
9:30 – Conversational Framework for Web Search and Recommendations
    Saurav Sahay and Ashwin Ram
9:50 – The GhostWriter-2.0 System: Creating a Virtuous Circle in Web 2.0 Product Reviewing
    Paul Healy and Derek Bridge
10:10 – On Retaining Web Search Cases
    David Leake and Jay Powell

10:30   Coffee break

10:45   **Workshop Session II**

CBR for Computer Games Workshop (Aula 101)
Chair Professors Manish Mehta, Santiago Ontañón, and Antonio A. Sánchez -Ruiz

10:45 – Feature Selection for CBR in Imitation of RoboCup Agents: A Comparative Study
    Edgar Raul Acosta Villaseñor, Babak Esfandiari and Michael W. Floyd
11:05 – Toward a Domain-Independent Case-Based Reasoning Approach for Imitation: Three Case
    Studies in Gaming
    Michael Floyd and Babak Esfandiari
11:25 – Meta-Level Behavior Adaptation in Real-Time Strategy Games
    Manish Mehta, Santiago Ontañón and Ashwin Ram
11:45 – Online Micro-Level Decision Making in Real-Time Strategy Games: A Case-Based Reasoning
    and Reinforcement Learning Approach
    Chad Mowery, Nathan Spencer and Isabelle Bichindaritz
12:05 – MMPM: a Generic Platform for Case-Based Planning Research
    *Pedro-Pablo Gómez Martín, David LLansó, Marco Antonio Gómez Martín, Santiago Ontañón
    and Ashwin Ram*
12:25 – Closing Remarks

Reasoning from Experiences on the Web Workshop (Aula 102)
Chair Professors Derek Bridge, Sarah Jane Delany, Enric Plaza, Barry Smyth, and Nirmalie Wiratunga

11:00 – Enabling Case-Based Reasoning on the Web of Data
    Benjamin Heitmann and Conor Hayes
11:20 – Deriving Case Base Vocabulary from Web Community Data
    Kerstin Bach, Christian Severin Sauer and Klaus-Dieter Althoff
11:40 – Similarity Assessment through Blocking and Affordance Assignment in Textual CBR
    Rajendra Prasath and Pinar Öztürk
12:00 – Panel Discussion
    Conor Hayes, David Leake and Enric Plaza

12:30   Lunch break

13:30   **Workshop Session III**

CBR Startups Workshop (Aula 101)
Chair Professors Ashwin Ram and Saurav Sahay

13:30 – Introduction and Context
    Ashwin Ram
13:40 – Barry Smyth, University College Dublin; Founder, HeyStaks
14:00 – Peter Funk, Mälardalen University; Founder, FunkAI
14:20 – Frode Sørmo, Norwegian University of Science and Technology; Founder, Verdande
14:40 – Panel Discussion with Open Audience Questions
15:10 – 3-Minute CBR Gauntlet Pitch Competition
15:30 – Meetup/Break-Out Session
15:50 – Close and Announcements
    Ashwin Ram

Provenance Aware CBR Workshop (Aula 102)
Chair Professors David Leake, Thomas Roth-Berghofer, Barry Smyth, and Joseph Kendall-Morwick

13:30 – Welcome and Overview
13:40 – Session I: Provenance for Case Capture and Enriching the CBR Process
    Dynamic Case-Based Reasoning for Contextual Reuse of Experience
      Amélie Cordier, Bruno Mascret and Alain Mille
    External Provenance, Internal Provenance, and Case-Based Reasoning
      David Leake and Joseph Kendall-Morwick
    Towards a Lazier Approach to Problem Solving in Case-Based Reasoning
      David McSherry
14:50 – Session II: Provenance to Support Explanation
    From Provenance-Awareness to Explanation-Awareness---When Linked Data Is Used for Case Acquisition from Texts
      Thomas Roth-Berghofer and Benjamin Adrian
    Explanations in Bayesian Networks using Provenance through Case-Based Reasoning
      Anders Kofod-Petersen, Agnar Aamodt and Helge Langseth
15:30 – Session III: General Discussion of Provenance-Aware CBR
    Next Steps for Advancing Investigation of PA-CBR

16:00   Coffee break

16:15   **Poster Session**

17:30   End of Sessions

Poster Session Papers

A Case Based Reasoning Approach for the Monitoring of Business Workflows
Stelios Kapetanakis, Miltos Petridis, Brian Knight, Jixin Ma, Liz Bacon

A Case-Based Reasoning Approach to Automating the Construction of Multiple Choice Questions
David McSherry

A Method Based on Query Caching and Predicate Substitution for the Treatment of Failing Database Queries
Olivier Pivert, Helene Jaudoin, Carmen Brando, Allel Hadjali

a.SCatch - Semantic Structure for Architectural Floor Plan Retrieval
Markus Weber, Christoph Langenhan, Thomas Roth-Berghofer, Marcus Liwicki, Andreas Dengel, Frank Petzold

Case Based Reasoning with Bayesian Model Averaging: an Improved Method for Survival Analysis on Microarray Data
Isabelle Bichindaritz, Amalia Annest

Case Retrieval with Combined Adaptability and Similarity Criteria:Application to Case Retrieval Nets
Nabila Nouaouria, Mounir Boukadoum

CBTV: Visualising Case Bases for Similarity Measure Design & Selection
Brian Mac Namee, Sarah Jane Delany

Detecting Change via Competence Model
Ning Lu, Guangquan Zhang, Jie Lu

Extending CBR with Multiple Knowledge Sources from Web
Juan A. Recio-Garcia, Miguel A. Casado-Hernandez, Belen Diaz-Agudo

Improving Pervasive Application Behavior Using Other Users' Information
Michael Spence, Siobh_an Clarke

On-the-Fly Adaptive Planning for Game-Based Learning
Ioana Hulpus, Conor Hayes, Manuel Fradinho

Recognition of Higher-order Relations Among Features in Textual Cases Using Random Indexing
Pinar Ozturk, Rajendra Prasath

Reexamination of CBR Hypothesis
Xi-feng Zhou, Ze-lin Shi, Huai-ci Zhao

Text Adaptation Using Formal Concept Analysis
Valmi Dufour-Lussier, Jean Lieber, Emmanuel Nauer, Yannick Toussaint

The Utility Problem for Lazy Learners - Towards a non-Eager Approach
Tor Gunnar Houeland, Agnar Aamodt

User Trace-Based Recommendation System for a Digital Archive
Reim Doumat, Elod Egyed-Zsigmond, Jean-Marie Pinon

Visualization for the Masses: Learning from the Experts
Jill Freyne, Barry Smyth

Wednesday – 21 July 2010

08:30 Registration (Front of Aula magna)

09:00 Welcome (Aula magna)

09:15 **Workshop Summaries**

09:45 **Invited Talk** – Why and how knowledge discovery can be useful for solving problems with CBR
Professor Amedeo Napoli

10:45 Coffee break

11:00 **Paper Session I: Adaptation & Reuse** (Chair Professor Agnar Aamodt)
　　11:00 – Amalgams: A Formal Approach for Combining Multiple Case Solutions
　　　　Santiago Ontañon, Enric Plaza
　　11:25 – An Algorithm for Adapting Cases Represented in an Expressive Description Logic
　　　　Julien Cojan, Jean Lieber
　　11:50 – A General Introspective Reasoning Approach to Web Search for Case Adaptation
　　　　David Leake, Jay Powell
12:15 Lunch break

13:30 **Paper Session II: Learning & Knowledge Elicitation** (Chair Professor David Aha)
　　13:30 – Imitating Inscrutable Enemies: Learning from Stochastic Policy Observation, Retrieval and
　　　　Reuse
　　　　Kellen Gillespie, Justin Karneeb, Stephen Lee-Urban, Hector Muñoz-Avila
　　13:55 – Reducing the Memory Footprint of Temporal Difference Learning over Finitely Many States
　　　　by Using Case-Based Generalization
　　　　Matt Dilts, Hector Muñoz-Avila
　　14:20 – A Case for Folk Arguments in Case-Based Reasoning
　　　　Luis A. L. Silva, John A. Campbell, Nicholas Eastaugh, Bernard F. Buxton
　　14:45 – Intelligent data interpretation and case base exploration through Temporal Abstractions
　　　　Alessio Bottrighi, Giorgio Leonardi, Stefania Montani, Luigi Portinale, Paolo Terenziani
15:10 Coffee break
15:25 **Paper Session III: Planning** (Chair Professor Enric Plaza)
　　15:25 – Case-based Plan Diversity
　　　　Alexandra Coman, Hector Muñoz-Avila
　　15:50 – Goal-Driven Autonomy with Case-Based Reasoning
　　　　Hector Muñoz-Avila, David W. Aha, Ulit Jaidee, Elizabeth Carter
16:15 PC Meeting

17:15 End of Sessions and Transportation to Gala Dinner

18:00 Gala Dinner Ristorante Antico Monastero – Lu Monferrato

Thursday – 22 July 2010

08:30   Registration (Front of Aula magna)

09:30   **Invited Talk** – Real-Time Case-Based Reasoning for Interactive Digital Entertainment
         Professor Ashwin Ram
10:30   Coffee break
10:45   **Paper Session IV: Textual CBR** (Chair Professor Susan Craw)
         10:45 – EGAL: Exploration Guided Active Learning for TCBR
                 Rong Hu, Sarah Jane Delany, Brian Mac Namee
         11:10 – Applying Machine Translation Evaluation Techniques to Textual CBR
                 Ibrahim Adeyanju, Nirmalie Wiratunga, Robert Lothian, Susan Craw
         11:35 – Taxonomic Semantic Indexing for Textual Case-Based Reasoning
                 Juan Recio-Garcia, Nirmalie Wiratunga
         12:00 – Introspective Knowledge Revision in Textual Case-Based Reasoning
                 Karthik Jayanthi, Sutanu Chakraborti, Stewart Massie
12:25   Lunch break
13:30   **Paper Session V: Tools and Applications** (Chair Professor Luigi Portinale)
         13:30 - Experience-Based Critiquing: Reusing Critiquing Experiences to Improve Conversational
                 Recommendation
                 Yasser Salem, Kevin McCarthy, Barry Smyth
         13:55 – Case Acquisition from Text: Ontology-based Information Extraction with SCOOBIE for myCBR
                 Thomas Roth-Berghofer, Benjamin Adrian, Andreas Dengel
         14:20 – Runtime Estimation Using the Case-based Reasoning Approach for Scheduling in a Grid
                 Environment
                 Edward Xia, Igor Jurisica, Julie Waterhouse, Valerie Sloan
         14:45 – Towards Case-Based Adaptation of Workflows
                 Mirjam Minor, Ralph Bergmann, Sebastian Goerg, Kirstin Walter
         15:10 – Similarity-Based Retrieval & Solution Re-Use Policies in the Game of Texas Hold'em
                 Jonathan Rubin, Ian Watson
15:35   Community Meeting & Closing

17   End of Sessions