Workshop on Evolutionary Computation and CBR - EvoCBR 2018

Genetic Algorithms and Evolutionary Computation are effective techniques, for achieving optimal or near optimal solutions which have gained explicit attention of researchers over the last decade, and is still growing each year. Many current research areas in Case-Based Reasoning such as case adaptation, feature selection, feature weight selection, and case injection among others can be solved using optimization techniques. However, despite work combining these two algorithms since the early 1990's, cross communication and collaboration between the two areas has diminished. This workshop is dedicated to the interplay between Evolutionary Computations and CBR. The goal of this workshop is to foster communication between researchers in these two areas and provide a forum to identify opportunities and challenges in both Evolutionary Computation and CBR which can be solved using each other.

We are looking for methods and techniques that exploit evolutionary computation for the benefit of Case-based reasoning (CBR) or vice versa. We particularly welcome contributions in areas that include, but are not limited to, the following:
- Hybrid Evolutionary Computation/CBR systems.
- Similarity function optimization using Evolutionary Computation
- Feature Selection using Evolutionary Computations
- Theoretical aspects of Evolutionary Computations and CBR.
- Evolutionary Computation for case adaptation.
- Evolutionary Computation in Case-Based Retrieval.
- Evolutionary Computation in Case-Based Reuse.
- Evolutionary Computation in Case-Based Revise.
- Evolutionary Computation in Case-Based Retain
- Evolutionary Computation in Case-Based creation.
- Applications that perform Evolutionary Computation and CBR.
- Nature-inspired algorithms and CBR.

We encourage everyone to make the research presented at this workshop reproducible. This means making the source code, the data and the experiments available to the workshop participants specifically and research community in general if possible. This is not required, only encouraged.

Program Committee: The following is a list of potential program committee members and their affiliations, who were chosen for their expertise and previous published work in both Evolutionary Computations and CBR or their significant expertise in one of the research areas:

Researcher	Affiliation
Mary Lou Maher	UNC Charlotte
David Aha	NRL

Micheal Floyd	Knexus Research Corporation
Sushil Louis	University of Nevada, Reno
Padraig Cunninham	UCD Dublin
Rainer Knauf	Technische Universitat Ilmenau
Tsuruta Setsuo	Tokyo Denki Univserity
Atilim Gunes Baydin	Oxford
Pei-Chann Chang	Yuan Ze University
Alice M Agogino	UC Berkley
Thomas Gabel	Frankfurt University of Applied Sciences
Maria Victoria Luzon Garcia	Universidad De Granada
Sanaj Petrovic	Nottingham University Business School
R. Paul Wiegand	University of Central Florida
Ioannis Hatzilygeroudis	University of Patras
Leen-Kiat Soh	University of Nebraska, Lincoln
Kellen Giellespe	Amazon
Bryan Auslander	Knexus Research Corporation

Why would this be interesting for the CBR community: We believe research in both areas can be used to solve problems in the other area and the connection deserves more attention from the broader community. Evolutionary computation is an active area of research the GECCO conference in 2017 had over 500 attendees. Many researchers also publish in IJCAI (for the past two years a workshop in evolutionary computations has been put on in IJCAI) which we are hoping to gain interest from.

Workshop agenda/format: The co-organizers will encourage participants to send in short and full length papers that discuss the interplay between Evolutionary Computations and CBR in some form. The papers will be presented by the authors. The length should be no less than a half day (4-6 presentations), but this depends on the number of submissions.
We will start with a presentation of a brief overview of Evolutionary Computations for context and a history of research overlapping the two communities. We would like to have one invited talk. We believe because of the co-location of IJCAI we will be able to find a suitable invited talk to bridge the two research areas. We will end the session with a discussion among the participants. Suggestions for topics to discuss will be presented/discussed in social media before the workshop.

Advertising: We will advertise the workshop on the CBR Linkedin group, the facebook group, twitter and reach out to researchers that has published papers on Evolutionary Computations and CBR in the past by email.

Paper review: The submitted papers will be reviewed by the co-organizers and the program committee, and the official deadlines from ICCBR will be used.

Co-Organizers:
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