Special Session on Metaheuristic Approaches in Data Mining and Feature Selection (MDMFS'10)

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Introduction: Feature selection is an important task in most pattern recognition and data mining problem. It is the search of important features that can be used to represent the whole original decision system, data or features. The search for important features are trivial that required new algorithms that can handle complex features or data. In this special session, we dedicated the research work on meta-heuristic approaches for feature selection.

Meta-heuristic algorithms refer to heuristic methods that have been widely used in solving optimum search problems. It is generally applied to problems where there is no exact algorithm that is appropriate to solve them. Most commonly used meta-heuristics are targeted to combinatorial optimization problems, such as timetabling, scheduling, space allocation, and also data mining tasks with an aim to obtain a more efficient solution for the problem in hand. Meta-heuristic algorithms can be classified into two categories i.e. a single-based solution approach and a population-based solution approach. Examples of single-based meta-heuristic algorithms are Tabu Search, Simulated Annealing, Great Deluge; and examples of population-based solution approach are Genetic Algorithm, Particle Swarm Algorithm and Artificial Immune System Algorithms.

Knowing meta-heuristic algorithms as one of the powerful stochastic optimization approach, it can be employed in reducing the size of the search space while looking for the minimal reduct in the attribute reduction problem. With this in mind, this session invites researchers in the area of Artificial Intelligence and Operation Research to explore the effectiveness of the meta-heuristic approaches in a new domain of data mining task.

Specific topics of interest

- Heuristic,

- metaheuristic,
- hyper heuristic approaches for feature selection, data reduction and searching in pattern recognition and data mining.

Instructions for Authors:

Papers must correspond to the requirements detailed in the (Paper Submission) on the conference flyer http://cig.iet.unipi.it/isda2010/flyer.pdf and All accepted papers will be published in the proceedings of ISDA'10 that will be also included in the IEEEXplore digital library. Extended versions of selected papers will be considered for publication

Registration Fees:

All papers must be presented by one of the authors, who must pay the registration fees.
http://cig.iet.unipi.it/isda2010/

Paper Reviewing and Publication

Submitted papers will be reviewed. Accepted papers, which should not exceed 6 pages (PDF) following the double column IEEE format. All accepted papers will be published in the proceedings of the ISDA'10. Selected papers will be published in special issues of a selection of International Journals (to be announced).

Tentative Dates of Submission and Acceptance

- Deadline for paper submission June 26, 2010
- Notification of acceptance August 14, 2010
- Camera-ready manuscript submission September 15, 2010