



A New Method for Determination of Silence Frame of the Speech Signals Using Feature of the Markovian

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Abstract:

This paper proposes a new method for determination of silence frames in noisy speech signals. In this method speech signals are considered as a discrete stochastic process, then it is proven that these stochastic process signals be considered as a Markov chain, then with extracting the feature of

Markovian, we propos a method for determination of silence frame speech signals. We compare the proposed method with the previous method, and the results show the proposed method as a better performance. Key words: VAD; Markov chain; LPC analysis.

SH8: Algorithms

حل مساله مجموعه مستقل ماکزیمال توسط اتماتاهای یادگیر توزیع شده

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Amirkabir University of Technology

Abstract:

Maximal independent set in a graph is a subset of nodes for which no two nodes are adjacent to each other and also this subset is not a subset of any larger independent set. This problem is NP-Complete and for this reason several approximate algorithms such as algorithms based on neural networks, genetic algorithm and simulated annealing for solving it are reported. In this paper three algorithms based on distributed learning automata for solving maximal independent set problem are proposed. In order to show the efficiency of these algorithms they are tested on a number of standard maximal independent set problems. It is shown that the proposed algorithms in term of accuracy and speed perform better than existing algorithms. Keywords: Maximal independent set, Learning Automata, Distributed Learning Automata

تشخیص و طبقه بندی هوشمند آریتمی های قلبی با استفاده از تبدیل ویولت و آنالیز ICA

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Abstract:

Over the last decades there has been a growing interest in algorithms inspired by the observation of natural

phenomenon. It has been shown by many researches that these algorithms are good replacement as tools to solve complex computational problems. A particle swarm optimization (PSO) is one of the modern heuristic algorithms that can be applied to continuous and discrete optimization problems. The origin binary PSO has got some disadvantages that makes the algorithm not to converge well. Due to these disadvantages, in this paper a new BPSO is introduced. The results show the superiority of the proposed method for solving complex optimization problems. Keywords: Particle swarm optimization, Binary PSO, Convergence.

A Secure Watermarking by Chaotic Function

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Abstract:

In this paper a secure watermarking system is proposed. Instead of embedding the original watermark into the cover image like the normal watermarking systems, the proposed system creates a chaotic sequence and embeds DCT transform of the original watermark via this sequence into the cover image, so the method is named Chaotic DCT Watermarking ,CDW. Another sequence is used to encrypt the coefficient of DCT. To reveal the original watermark, the correct keys are required. Simulation results show the higher security and lower memory can be achieved by the proposed method.

یک الگوریتم مرتب سازی برای اتوماتای سلولی یک بعدی

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Abstract:

Sorting is one of the fundamental problems in computer science and for this reason so many different algorithms for different computer architectures have been designed. Not much work has been done on sorting for one dimensional cellular automata machine. The only sorting algorithm reported for this machine is designed by Gordillo and Luna. This algorithm sorts n numbers in $2n-3$ steps. In this paper a new sorting algorithm for one dimensional cellular automata machine is proposed. The proposed algorithm sorts n numbers in $n-1$ steps and therefore its speed is twice the speed of the algorithm reported by Gordillo and Luna. Keywords: Cellular Automata, Sorting, Parallel Computation.



الگوریتمهای ترکیبی (الگوریتم ژنیتک + اتماتاهای

یادگیر) برای حل مسئله درخت اشتاینر

*Samira Noferesti- Mohammad Reza Mibodi**Computer and IT Department, Amirkabir University of
Technology***Abstract:**

Steiner tree problem is an NP-Complete problem and for this reason several approximate algorithms for solving it have been reported in the literatures. In this paper an approximate algorithm which is obtained from the combination of genetic algorithm and learning automata for solving static Steiner tree problem is proposed. Using this algorithm an algorithm for dynamic Steiner tree problem is also designed. To show the efficiency of the proposed algorithms, they are tested on the set of beasley graphs and then the results are compared with the results for some existing algorithms. The results show the efficiency of the proposed algorithms. Keywords: Learning Automata, Genetic Algorithm, Steiner Tree

یک الگوریتم ترکیبی (کلونی مورچه‌ها + اتماتاهای

یادگیر) برای حل مسئله درخت اشتاینر ایستا

*Somira Noferesti- mohammad reza mibodi;**Computer and IT Department, Amirkabir University of
Technology***Abstract:**

In this paper an approximate algorithm which is obtained from combining genetic algorithm and learning automata for solving static steiner tree problem is proposed. The proposed algorithm, is the ants colony algorithm for solving steiner tree problem in which a set of learning automata is used for adaptation of parameters of ants colony algorithm. In the proposed algorithm each group of ants is equipped with three learning automata each of which is responsible for adaptation of one of the parameters of ants colony algorithm. The results of experiments show that the proposed algorithm outperforms the ants colony algorithm. Keywords: Learning Automata, Parameter Adaptation, Ants Colony, Steiner Tree.