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The present paper focuses on the characterization of NP-hard problems. In related work, characterization metrics are traditionally oriented towards problem structure. In this work, we propose metrics based on descriptive statistics for the Bin Packing Problem (BPP).

REVISTA: Hybrid Artificial Intelligent Systems - Springer-Verlag (pags. 26-33), MÉXICO; ISSN: 0302-9743;

DIRECCION ELECTRÓNICA: http://link.springer.com/chapter/10.1007/978-3-642-21222-2_4

PROPÓSITO: Generación de Conocimiento; SECTOR → DISCIPLINA: (Tecnologías de la Información y Comunicaciones → Computación)

2011-01-01

Optimization of a Modular Neural Network for Pattern Recognition using Parallel Genetic Algorithm

Autor(es): Cárdenas, Martha; Melin, Patricia; Cruz-Reyes Laura

In this paper, the implementation of a Parallel Genetic Algorithm (PGA) for the training stage, and the optimization of a monolithic and modular neural network, for pattern recognition are presented. The optimization consists in obtaining the best architecture in layers, and neurons per layer achieving the less training error in a shorter time.

REVISTA: Journal of Automation Mobile Robotics and Intelligent Systems - PIAP Industrial Research Institute for Automation and Measurements (pags. 77-84), MÉXICO; ISSN: 1897-8649;

DIRECCION ELECTRÓNICA: <http://yadda.icm.edu.pl/yadda/element/bwmeta1.element.baztech-article-BUJ5-0030-0036/c/httpwww.jamris.org012011saveas.phpquestjamrisno012011p77-84.pdf>

PROPÓSITO: Generación de Conocimiento; SECTOR → DISCIPLINA: (Tecnologías de la Información y Comunicaciones → Computación)

2011-01-01

Adaptive Ant-Colony Algorithm for Semantic Query Routing

Autor(es): Gómez-Santillán, Claudia; Cruz-Reyes, Laura; Schaeffer, Elisa; Meza, Eustorgio; Rivera-Zarate, Gilberto
This paper presents a new ant-colony algorithm, Adaptive Neighboring-Ant Search (AdaNAS), for the semantic query routing problem (SQRP) in a P2P network. The proposed algorithm incorporates an adaptive control parameter tuning technique for runtime estimation of the time-to-live (TTL) of the ants.

REVISTA: Journal of Automation, Mobile Robotics & Intelligent Systems - PIAP Industrial Research Institute for Automation and Measurements (pags. 85-94), MÉXICO; ISSN: 1897-8649;

DIRECCION ELECTRÓNICA: <http://yadda.icm.edu.pl/yadda/element/bwmeta1.element.baztech-article-BUJ5-0030-0037/c/httpwww.jamris.org012011saveas.phpquestjamrisno012011p85-94.pdf>

PROPÓSITO: Generación de Conocimiento; SECTOR → DISCIPLINA: (Tecnologías de la Información y Comunicaciones → Computación)

2010-07-01

Reducing the Experiments Required to Assess the Performance of Metaheuristic Algorithms.

Autor(es): Fraire-Huacuja, Héctor Joaquín; Pazos-Rangel, Rodolfo Abraham; González-Barbosa, Juan Javier; Cruz-Reyes, Laura; Castilla-Valdez, Guadalupe; Martínez-Flores, José A.

In this work we develop general-purpose methods, which allow incorporating techniques of variance reduction, independently of the problem and of the metaheuristic algorithm used. To validate the feasibility of the approach, a general-purpose method is described which allows incorporating the antithetic variables technique in computational experiments with randomized metaheuristic algorithms.

REVISTA: Computación y Sistemas, Revista Iberoamericana de Computación - Scielo (pags. 44-53), MÉXICO; ISSN: 1405-5546; INDEXADO EN: CONACYT

DIRECCION ELECTRÓNICA: <http://scielo.unam.mx/pdf/cys/v14n1/v14n1a5.pdf>

PROPÓSITO: Generación de Conocimiento; SECTOR → DISCIPLINA: (Tecnologías de la Información y Comunicaciones → Computación)

2010-06-23

A Cultural Algorithm for the Urban Public Transportation

Autor(es): Cruz-Reyes, Laura; Ochoa-Ortiz Zezzatti, Carlos Alberto; Gómez-Santillán, Claudia; Hernández-Hernández, Paula; Villa-Fuerte, Mercedes

To give a solution of obtaining an optimized route between two points in a public transportation, a method based on the cultural algorithms technique is proposed.

REVISTA: Hybrid Artificial Intelligence Systems - Springer-Verlag (pags. 135-142), MÉXICO; ISSN: 0302-9743;

DIRECCION ELECTRÓNICA: http://link.springer.com/chapter/10.1007/978-3-642-13803-4_17

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2010-06-01

A Self Adaptive Ant Colony System for Semantic Query Routing Problem in P2P Networks.

Autor(es): Gómez-Santillán, Claudia; Cruz-Reyes, Laura; Meza-Conde, Eustorgio; Castilla-Valdez, Guadalupe; Schaeffer, Elisa

In this paper, we present a new algorithm to route text queries within a P2P network, called Neighboring-Ant Search (NAS) algorithm. The algorithm is based on the Ant Colony System metaheuristic and the SemAnt algorithm.

REVISTA: Computación y Sistemas - Scielo (pags. 433-448), MÉXICO; ISSN: 1405-5546; INDEXADO EN: CONACYT

DIRECCION ELECTRÓNICA: <http://scielo.unam.mx/pdf/cys/v13n4/v13n4a7.pdf>

PROPÓSITO: Generación de Conocimiento; SECTOR → DISCIPLINA: (Tecnologías de la Información y Comunicaciones → Computación)

2009-08-01

Improving Distributed Resource Search through a Statistical Methodology of Topological Feature Selection

Autor(es): Gómez-Santillán, Claudia Guadalupe; Cruz-Reyes, Laura; Meza, Eustorgio; Turrubiates-López, Tania; Aguirre-Lam, Marco A.; Schaeffer, Satu Elisa

The goal of this work is to improve the performance of distributed search of information, through analysis of the topological features. In this paper we described a statistical methodology to select a set of topologic metrics that allow to locally distinguish the type of complex network.

REVISTA: Journal of Computers - Academy Publisher (pags. 727-733), FINLANDIA; ISSN: 1796-203X;

DIRECCION ELECTRÓNICA: <http://ojs.academypublisher.com/index.php/jcp/article/viewArticle/734>