

2015-
09-21

Clustering Bin Packing Instances for Generating a Minimal Set of Heuristics by Using Grammatical Evolution
Autor(es): Sotelo-Figueroa, Marco Aurelio; Puga-Soberanes, Héctor José; Carpio, Juan Martín; Fraire-Huacuja, Héctor J.; Cruz-Reyes, Laura; Soria-Alcaraz, Jorge Alberto
The present work proposes a methodology to cluster bin packing instances and choose the instances to generate an heuristic for each cluster. The number of heuristics generated is based on the number of clusters.
LIBRO: Fuzzy Logic Augmentation of Nature-Inspired Optimization Metaheuristics - Springer International Publishing (pags. -), MÉXICO; ISBN: 978-3-319-10959-6;
PROPÓSITO: Generación de Conocimiento; SECTOR → DISCIPLINA: (Tecnologías de la Información y Comunicaciones → Sistemas computacionales)

2015-
06-13

An Efficient Representation Scheme of Candidate Solutions for the Master Bay Planning Problem
Autor(es): Hernández-Hernández, Paula; Cruz-Reyes, Laura; Melin, Patricia; Mar-Ortiz, Julio; Fraire-Huacuja, Héctor Joaquín; Puga-Soberanes, Héctor José; González-Barbosa, Juan Javier
In this chapter, we propose a new exact algorithm based on a branch and bound (B&B) approach. The main feature is the usage of an efficient representation structure of candidate solutions.
LIBRO: Design of Intelligent Systems Based on Fuzzy Logic, Neural Networks and Nature-Inspired Optimization - Springer International Publishing (pags. -), MÉXICO; ISBN: 978-3-319-17746-5;
PROPÓSITO: Generación de Conocimiento; SECTOR → DISCIPLINA: (Tecnologías de la Información y Comunicaciones → Computación)

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06-13

An ant colony algorithm for solving the selection portfolio problem, using a quality-assessment model for portfolios of projects expressed by a priority ranking.
Autor(es): Bastiani, Samantha; Cruz-Reyes, Laura; Fernandez, Eduardo; Gómez, Claudia; Rivera, Gilberto
Our paper introduces a new discrepancies model and an ant colony algorithm with a local search multi-objective, which in conjunction shows as a solid method to provide an approximation of Pareto Frontier.
LIBRO: Design of Intelligent Systems Based on Fuzzy Logic, Neural Networks and Nature-Inspired Optimization, Studies in Computational Intelligence - Springer International Publishing (pags. -), MÉXICO; ISBN: 978-3-319-17746-5;
PROPÓSITO: Generación de Conocimiento; SECTOR → DISCIPLINA: (Tecnologías de la Información y Comunicaciones → Computación)

2015-
06-13

Simplification of Decision Rules for Recommendation of Projects in a Public Project Portfolio
Autor(es): Cruz-Reyes, Laura; Medina-Trejo, Cesar; Lopez-Irarragorri, Fernando; Gomez-Santillan, Claudia
In this paper, we propose the use of decision rules to aid in the recommendation of a portfolio of public projects. A decision table indicates what decisions should be made when the condition attributes are satisfied.
LIBRO: Design of Intelligent Systems Based on Fuzzy Logic, Neural Networks and Nature-Inspired Optimization, Studies in Computational Intelligence - Springer International Publishing (pags. -), MÉXICO; ISBN: 978-3-319-17746-5;
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2015-
06-13

A Survey of Grey Systems Applied to Multi-objective Problem
Autor(es): Balderas, Fausto; Fernandez, Eduardo; Gómez, Claudia; Cruz-Reyes, Laura
The aim of this chapter is to provide a short review of the three mostly seen research methods employed for the investigation of uncertain systems: probability and statistics, fuzzy mathematics and grey systems theory. This chapter provides a short review of the general framework, current research trends and future research topics on grey systems applied to decision problems.
LIBRO: Design of Intelligent Systems Based on Fuzzy Logic, Neural Networks and Nature-Inspired Optimization - Springer International Publishing (pags. -), MÉXICO; ISBN: 978-3-319-17746-5;
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2015-
06-13

Verifying the Effectiveness of an Evolutionary Approach in Solving Many-Objective Optimization Problems.
Autor(es): Cruz-Reyes, Laura; Fernandez, Eduardo; Gomez, Claudia; Sanchez, Patricia; Castilla, Guadalupe; Martinez, Daniel
In this work, a comparative study of the performance of NSGA-II and NSGA-III was carried out. Our aim is to verify the effectiveness of NSGA-III to deal with many-objectives problems and extend the range of problems that this approach can solve.
LIBRO: Design of Intelligent Systems Based on Fuzzy Logic, Neural Networks and Nature-Inspired Optimization - Springer International Publishing (pags. -), MÉXICO; ISBN: 978-3-319-17746-5;
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2014-
03-27

Characterization of the Optimization Process
Autor(es): Quiroz, Marcela; Cruz-Reyes, Laura; Torres-Jimenez, Jose; Gómez-Santillán, Claudia; Fraire-Huacuja, Héctor J.; Melin, Patricia
This work provides a summary of the main works related to the characterization of heuristic algorithms, by comparing the works done in understanding how and why algorithms follow certain behavior.
LIBRO: Recent Advances on Hybrid Approaches for Designing Intelligent Systems - Springer International Publishing (pags. -), MÉXICO; ISBN: 978-3-319-05169-7;
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2014-
03-27

A Loading Procedure for the Containership Stowage Problem
Autor(es): Laura, Cruz-Reyes; Hernández-Hernández, Paula; Melin, Patricia; Fraire-Huacuja, Héctor Joaquín; Mar-Ortiz, Julio; Puga-Soberanes, Héctor José; González-Barbosa, Juan Javier