

We propose a mathematical model framework in which each project proposal is comprised of tasks with a specific type of expense and the assigned funding may be a fraction of the requested amount, accounting for possible inter- and intra-proposal dependencies.

REVISTA: Decision Support Systems - Elsevier (pags. 0-0), MÉXICO; ISSN: 0167-9236; INDEXADO EN: JCR

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

2016-02-03

Static R&D project portfolio selection in public organizations.

Autor(es): Arratia-Martínez, Nancy M.; López-Irarragorri, Fernando; Shaeffer, Satu Elisa; Cruz-Reyes, Laura

The problem of static research and development (R&D) project portfolio selection arises when a public organization opens a call for proposals and then builds a portfolio choosing which ones to fund in terms of impact measures including social objectives, emphasis areas, geographical influence, and other non-monetary factors.

REVISTA: Science Direct - Elsevier (pags. 53-63), MÉXICO; ISSN: 0167-9236;

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2015-12-17

Reduction of Decision Rules for Project Explanation on Public Project Portfolio

Autor(es): Cruz-Reyes, Laura; Medina-Trejo, Cesar; Lopez-Irarragorri, Fernando; Rivera, Gilberto; Gomez-Santillan, Claudia; Perez-Villafrute, Mercedes

In this paper we propose to aid the recommendation of public projects with the utilization of simplified decision rules to explain the construction of the recommended project portfolio.

REVISTA: International Journal of Combinatorial Optimization Problems and Informatics - Editorial Académica Dragón Azteca (pags. 5-21), MÉXICO; ISSN: 2007-1558; INDEXADO EN: CONACYT

DIRECCION ELECTRÓNICA: <http://search.proquest.com/openview/94c89196b31915617d0bd4fb832f6e2c/1?pq-origsite=gscholar&cbl=696410>

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2015-12-15

Portfolio Optimization From a Set of Preference Ordered Projects Using an Ant Colony Based Multi-objective Approach.

Autor(es): Bastiani-Medina, Samantha; Cruz-Reyes, Laura; Fernandez-Gonzalez, Eduardo; Gomez-Santillan, Claudia

In this paper, a good portfolio is found through an ant colony algorithm (including a local search) that approximates the Pareto front regarding some kind of project categorization, cardinalities, discrepancies with priorities given by the ranking, and the average rank of supported projects; this approach is an improvement towards a proper modeling of preferences.

REVISTA: International Journal of Computational Intelligence Systems - Taylor & Francis (pags. 41-53), MÉXICO; ISSN: 1875-6891; INDEXADO EN: JCR

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2015-12-10

Multiobjective Optimization Approach for Preference-Disaggregation Analysis Under Effects of Intensity

Autor(es): Rangel-Valdez, Nelson; Fernandez, Eduardo; Cruz-Reyes, Laura; Gómez-Santillán, Claudia; Hernandez-Lopez, Rodolfo Ivan

This paper proposes a new optimization model for PDA, and its solution through an evolutionary algorithm.

REVISTA: Advances in Artificial Intelligence and its Applications - Springer International Publishing (pags. 451-462), MÉXICO; ISSN: 0302-9743;

DIRECCION ELECTRÓNICA: dx.doi.org/10.1007/978-3-319-27101-9_34

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2015-12-10

TwoPILP: An integer programming method for HCSP in parallel computing centers

Autor(es): Soto-Monterrubio, José Carlos; Fraire-Huacuja, Héctor Joaquín; Frausto-Solis, Juan; Cruz-Reyes, Laura; Pazos-R., Rodolfo; González-Barbosa, J. Javier

In this paper, an integer linear programming model for HCSP is presented. In addition, a multi-objective method called TwoPILP (Two-Phase Integer Linear Programming) is proposed for this model. TwoPILP consists of two phases. The first minimizes the makespan using a classic branch and bound method. The second phase minimizes the energy consumption by selecting adequate voltage levels.

REVISTA: Advances in Artificial Intelligence and its Applications - Springer International Publishing (pags. 463-474), MÉXICO; ISSN: 0302-9743;

DIRECCION ELECTRÓNICA: [10.1007/978-3-319-27101-9_35](http://dx.doi.org/10.1007/978-3-319-27101-9_35)

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2015-11-07

Solution of a Bi-Objective Purchasing Scheduling Problem with Constrained Funds using Pareto Optimization.

Autor(es): Delgado-Orto, José Francisco; Cruz-Reyes, Laura; Palacios-Espinosa, Alejandro; Ayala-Esquivel, Christian

In this paper the Purchasing Scheduling Problem (PSP) with limited funds is presented. PSP is formulated through the optimization of two objectives based on the inventory-supply process: maximization of satisfied demands and minimization of purchasing costs.

REVISTA: Research in Computer Science - CIC-IPN Mexico (pags. 41-50), MÉXICO; ISSN: 1870-4069;

DIRECCION ELECTRÓNICA: http://rcs.cic.ipn.mx/rcs/2015_104/Solution%20of%20a%20Bi-Objective%20Purchasing%20Scheduling%20Problem%20with%20Constrained%20Funds%20using%20Pareto.pdf

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2015-07-07

Towards a Characterization of Difficult Instances of the Bin Packing Problem