EURO Special Interest Group on Cutting and Packing

5th ESICUP Meeting

L'Aquila, Italy, April 20 - 22, 2008

Sponsored by

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6th Framework Programme on Research, Technological Development and Demonstration

Scientific Program Schedule

Monday, 21th April

9h30 – 10h30

Opening + Session 1 (*Room A*)
Chairperson: Claudio Arbib

Welcome

1.1 – 2-Dimensional packing problems in telecommunications (Invited Talk)

Andrea Lodi, Silvano Martello, Michele Monaci

11h00 – 12h30

Session 2 (*Room A*)
Chairperson: Gerhard Wäscher

2.1 – Research support tools in cutting and packing: a survey

José F. Oliveira, A. Miguel Gomes

2.2 – Extended Cutting Problems: A Review

Gerhard Wäscher, Sebastian Henn

2.3 – Non-Identical Circle Packing

Rym M'Hallah

2.4 – Cutting Stock with No Three Parts per Pattern: Work-in-process and Pattern Minimization

Claudio Arbib, Alessandro Aloisio, Fabrizio Marinelli

14h00 – 15h50

Session 3a (*Room A*)
Chairperson: Reinaldo Morabito

3a.1 – Theoretical investigations on maximal dual feasible functions

Jürgen Rietz, Cláudio Alves, Rita Macedo, J. M. Valério de Carvalho, Filipe Alvelos, T. M. Chan, Elsa Silva

3a.2 – A branch & bound approach for the 1D contiguous cutting-stock problem

M. Mesyagutov, G. Belov, G. Scheithauer

3a.3 – The one dimensional cutting stock problem with usable leftovers and handling constraints: a case study

Kelly Cristina Poldi, Gerhard Wäscher

3a.4 – A Local-Search Approach for Solving a Bin-Packing Problem with Secondary Objectives

Heinz Schmitz, Sebastian Niemann

3a.5 – An effective recursive partitioning approach for the packing of identical rectangles in a rectangle

Reinaldo Morabito, Ernesto G. Birgin, Rafael D. Lobato

Session 3b (*Room B*)
Chairperson: Yu. Stoyan

3b.1 – A proposal for a new scheme for No Fit Polygon using XML
Roberto Licari, Ernesto Lo Valvo

3b.2 – A Variant Beam Search Implementation for the Irregular Shape Bin Packing Problem
Xiang Song, Julia A. Bennell

3b.3 – A Mixed Integer Programming and Global Optimization approach for non-standard packing problems with additional constraints
Giorgio Fasano

3b.4 – Packing of rotating circular segments and primary objects
T. Romanova, Yu. Stoyan, M. Zlotnik, E. Stupak

3b.5 – Packing identical spheres into a right circular cylinder
Yu. Stoyan, G. Yaskov

16h20 – 18h10

Session 4a (*Room A*)
Chairperson: Andreas Bortfeldt

4a.1 – New Heuristics for Two Dimensional Bin Packing Problem
Chan Tak Ming, Filipe Alvelos, Elsa Silva, J. M. Valério de Carvalho, Cláudio Alves, Rita Macedo

4a.2 – An Approximation Algorithm for Rectangle Packing with Rotations
Rolf Harren, Rob van Stee

4a.4 – The Two-Dimensional Guillotine Bin Packing Problem with Multiple Bin Sizes and Costs
Sergey Polyakovskiy, Rym M'Hallah

4a.3 – A Hyper-heuristic Approach to Strip Packing Problems
Q. Guo, E. K. Burke, G. Kendall

4a.5 – A Tree Search Algorithm for Solving the Two-Dimensional Knapsack Problem
Andreas Bortfeldt, Tobias Fanslau

Session 4b (*Room B*)
Chairperson: Horacio Yanasse

4b.1 – An Adaptive Genetic Algorithm for the Pattern Sequencing Problem
Luigi De Giovanni, Ferdinando Pezzella, Gionata Massi

4b.2 – A heuristic for the cutting stock problem with a limit on the maximum number of open stacks
Filipe Alvelos, Chan Tak Ming, Elsa Silva, J. M. Valério de Carvalho, Cláudio Alves, Rita Macedo

4b.3 – Solving exactly the Pattern Minimization Problem using a hybrid algorithm based on Integer and Constraint Programming
Rita Macedo, Cláudio Alves, J. M. Valério de Carvalho

4b.4 – Exact methods for solving the open stack problem

Paolo Ventura, Luigi De Giovanni, Ferdinando Pezzella, Marc Pfetsch, Giovanni Rinaldi

4b.5 – A size reducing procedure for the minimization of open stacks problem

Horacio Hideki Yanasse

Tuesday, 22th April

9h00 – 10h30

Session 5a (*Room A*)
Chairperson: J. M. Valério de Carvalho

5a.1 – Improved Upper Bounds for the Two-Dimensional Guillotine Cutting Stock Problem

Mauro Russo, Antonio Sforza, Claudio Sterle

5a.2 – A Model for the Exact Solution of Two Dimensional Cutting Stock Problem

J. M. Valério de Carvalho, Cláudio Alves, Rita Macedo, Mehdi Mrad, Filipe Alvelos, Chan Tak Ming, Elsa Silva

5a.3 – Exact Algorithms for the Two-Dimensional Cutting Stock Problem

Cláudio Alves, Rita Macedo, Mehdi Mrad, J. M. Valério de Carvalho, Filipe Alvelos, Chan Tak Ming, Elsa Silva

5a.4 – A new integer programming model for the two-staged two dimensional cutting stock problem

Elsa Silva, Filipe Alvelos, J. M. Valério de Carvalho

Session 5b (*Room B*)
Chairperson: José Fernando Gonçalves

5b.1 – A Model for the Vehicle Routing with Time Windows and Loading Problem

Ana Moura, José F. Oliveira, Maria Antónia Carravilla

5b.2 – Transportation and Bin Packing Complex in Delivery Logistics

Nadezhda A. Gilmanova, Ural A. Karipov

5b.3 – A heuristic approach for a container loading problem with non-convex domain

Antonio Sforza, Claudio Sterle, Mauro Russo

5b.4 – A Maximal Space Multi-population Genetic Algorithm for the Container Loading Problem

José Fernando Gonçalves

11h00 – 12h30

Session 6 (*Room A*)
Chairperson: Gleb Belov

6.1 – LP-based branching in the interval graph algorithm for orthogonal packing

G. Belov, V. Kartak, H. Rohling

6.2 – An Exact Algorithm for the Two-Dimensional Strip Packing Problem

Marco Antonio Boschetti, Lorenza Montaletti

6.3 – A practical C&P application for cutting steel plates

Gesine Draeger, Andreas Bortfeldt

6.4 – A hybrid GRASP/VND algorithm for two and three-dimensional bin packing

F. Parreño, R. Alvarez-Valdes, J.F. Oliveira, J.M. Tamarit

12h30 – 12h40

Closing Session (*Room A*)
Chairperson: José F. Oliveira

Closing notes