VIII ALIO/EURO

Workshop on Applied Combinatorial Optimization
December 8 - 10, 2014, Montevideo, Uruguay

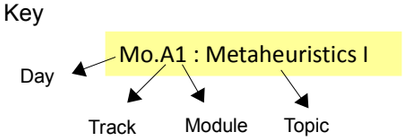
Program

Monday 8	Track *A* held at Room 1	Track B held at Room 2
8:00 - 8:30	*Registration*	
8:30 - 9:00	*Opening*	
9:00 - 10:00	Plenary Talk 1 : Andrés Weintraub (Room 1)	
10:00 - 11:00	Mo.A1 : Metaheuristics I	Mo.B1 : Polyhedral Combinatorics I
11:00 - 11:30	*Coffee Break*	
11:30 - 12:30	Mo.A2 : Energy Sector	Mo.B2 : Other Applications I
12:30 - 14:30	*Lunch*	
14:30 - 15:50	Mo.A3 : Vehicle Routing I	Mo.B3 : Hybrid Heuristics
15:50 - 16:20	*Coffee Break*	
16:20 - 17:40	Mo.A4 : Vehicle Routing II	Mo.B4 : Branch and Cut and Price I
18:00	*Welcome Cocktail*	

Tuesday 9	Track A held at Room 1	Track B held at Room 2
09:00 - 10:00	Tu.A1 : Transportation and Logistics I	Tu.B1 : Scheduling I
10:00 - 11:00	Plenary Talk 2 : Michel Gendreau (Room 1)	
11:00 - 11:30	*Coffee Break*	
11:30 - 12:30	Tu.A2 : Transportation and Logistics II	Tu.B2 : Scheduling II
12:30 - 14:30	*Lunch*	
14:30 - 15:30	Tu.A3 : Graphs and Theoretical Aspects I	Tu.B3 : Branch and Cut and Price II
15:30 - 16:00	*Coffee Break*	
16:00 - 17:00	Tu.A4 : Metaheuristics II	Tu.B4 : Polyhedral Combinatorics II
17:30	*Gala Dinner (Pick up time at 17:30)*	

Wednesday 10	Track A held at Room 1	Track B held at Room 2
09:00 - 10:00	We.A1 : Transportation and Logistics III	We.B1 : Network Flows and Packing
10:00 - 11:00	Plenary Talk 3 : Thomas Stützle (Room 1)	
11:00 - 11:30	*Coffee Break*	
11:30 - 12:30	We.A2 : Scheduling III	We.B2 : (Not established)
12:30 - 14:30	*Lunch*	
14:30 - 15:50	We.A3 : Vehicle Routing III	We.B3 : Natural Resource Management
15:50 - 16:20	*Coffee Break*	
16:20 - 17:40	We.A4 : Graphs and Theoretical Aspects II	We.B4 : Other applications II
17:45	*Closure*	

Key

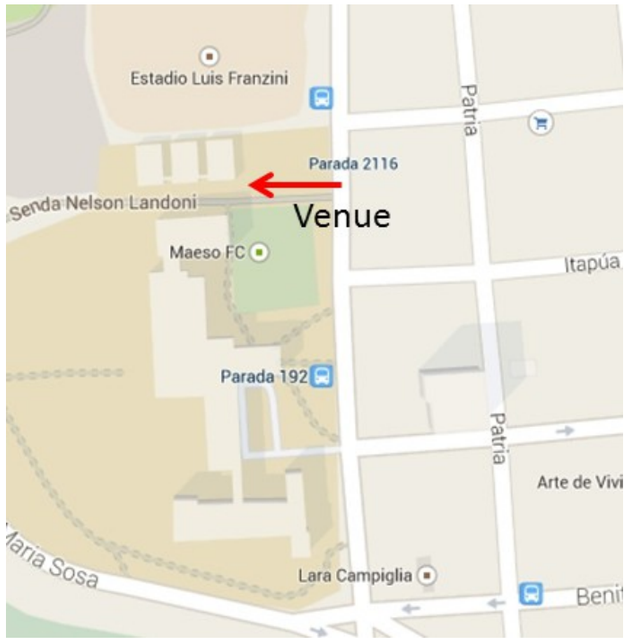


The Eighth ALIO / EURO Workshop on Applied Combinatorial Optimization will be held at the Edificio Polifuncional "José Luis Massera"

The Registration and Information Desk is located in the module C of the building.

Address:
Senda Nelson Landoni c/ Julio Herrera y Reissig.
Montevideo, Uruguay.

Website:
http://www.fing.edu.uy/en/alio-euro-2014



Talks

Monday 8

Mo.A1 : Metaheuristics I	Mo.B1 : Polyhedral Combinatorics I
Mo.A1 : 09:00 – 09:20 A Genetic Algorithm Based Heuristic for the Design of p-Cycle Networks *Remberto Emanuel Delgadillo and Irene Loiseau*	Mo.B1 : 09:00 – 09:20 Cycle-based facets of the acyclic coloring *Mónica Braga and Javier Marenco*
Mo.A1 : 09:20 – 09:40 A parallel micro evolutionary algorithm for taxi sharing optimization *Renzo Massobrio, Gabriel Fagúndez and Sergio Nesmachnow*	Mo.B1 : 09:20 – 09:40 The maximum-impact coloring polytope *Mónica Braga, Diego Delle Donne, Javier Marenco and Rodrigo Linfati*
Mo.A1 : 09:40 – 10:00 Solving an agricultural investment decision model using genetic algorithms *Xavier Gonzalez and German Gual*	Mo.B1 : 09:40 – 10:00 Characterizing N+-perfect line graphs *Mariana Escalante, Graciela Nasini and Annegret Wagler*
Mo.A2 : Energy Sector	**Mo.B2 : Other Applications I**
Mo.A2 : 11:30 – 11:50 Optimal Planning of an Electrical Consumer Billing Schedule *Leontina Pinto, Marcelo Fernandez, Robinson Semolini and Caio Pereira*	Mo.B2 : 11:30 – 11:50 Efficient assignment of voters to voting centers via Math Programming *Mauro Giormenti, Nicolás Stier-Moses and Guillermo Durán*
Mo.A2 : 11:50 – 12:10 A Scenario-Based Forecast Error Mitigation Approach for a Two-Stage Robust UCP: An Application in Chile *Eduardo Álvarez-Miranda, Camilo Campos Valdés and Claudia Rahmann*	Mo.B2 : 11:50 – 12:10 Multiobjective optimization of clothes drying in industrial laundry *Eduardo Oliveira, Mauro Ravagnani and Caliane Costa*
Mo.A2 : 12:10 – 12:30 Stochastic modeling of fuel procurement with blend quality, contractual and logistic constraints *Bernardo Zimberg, Germán Ferrari and Carlos E. Testuri*	Mo.B2 : 12:10 – 12:30 Bi-objective Exact Optimization of Satellite Payload Power Configuration *Emmanuel Kieffer, Apostolos Stathakis, Grégoire Danoy, Pascal Bouvry and Gianluigi Morelli*

Mo.A3 : Vehicle Routing I	Mo.B3 : Hybrid Heuristics
Mo.A3 : 14:30 – 14:50 Optimization of Planning Routes in Solid Waste Collection *Thelma Pretel Brandão Vecchi, Paulo Roberto Paraíso, Mauro Antônio Silva Sá Ravagnani and Luiz Mario de Matos Jorge*	Mo.B3 : 14:30 – 14:50 Hybrid heuristic with BRKGA and CS for the Berth Allocation Problem: a case study *Carlos Zaca Pomari and Antonio Augusto Chaves*
Mo.A3 : 14:50 – 15:10 A Vehicle Routing Problem in Glass Waste Collection *Gerhard Waescher, Tino Henke and M. Grazia Speranza*	Mo.B3 : 14:50 – 15:10 Hybrid metaheuristic for parallel machine scheduling with jobs compatibility constraints and sequence-dependent setup times *Edson Senne and Antonio Chaves*
Mo.A3 : 15:10 – 15:30 A Collaborative Ant Colony Optimization Algorithm for the Prize-Collecting Capacitated Location Routing Problem *Daniel Negrotto and Irene Loiseau*	Mo.B3 : 15:10 – 15:30 Hybrid Integer Programming Heuristic to a Generalized Project Scheduling Problem *Túlio Toffolo, Haroldo Santos, Marco Antonio Carvalho, Janniele Soares, Tony Wauters and Greet Vanden Berghe*
Mo.A3 : 15:30 – 15:50 A multi-objective model to increase security and reduce travel costs in the cash-in-transit sector *Luca Talarico, Kenneth Sörensen and Johan Springael*	Mo.B3 : 15:30 – 15:50 An ILP based heuristic for a generalization of the post-enrolment course timetabling problem *Isabel Mendez-Diaz, Juan Jose Miranda Bront and Paula Zabala*
Mo.A4 : Vehicle Routing II	**Mo.B4 : Branch and Cut and Price I**
Mo.A4 : 16:20 – 16:40 A Branch and Cut algorithm for the Time-Dependent Travelling Salesman Problem with Time Windows *Isabel Mendez-Diaz, Juan José Miranda Bront, Paolo Toth and Paula Zabala*	Mo.B4 : 16:20 – 16:40 A Column Generation Approach for the Virtual Network Embedding Problem *Leonardo Fernando Dos S. Moura and Luciana Buriol*
Mo.A4 : 16:40 – 17:00 Branch-and-Cut Algorithm for the Pickup and Delivery Travelling Salesman Problem with Multiple Stacks *Afonso Sampaio and Sebastián Urrutia*	Mo.B4 : 16:40 – 17:00 Column Generation Approach for the Capacitated Ring Tree Problem *Edna Hoshino and Alessandro Hill*
Mo.A4 : 17:00 – 17:20 Branch-and-cut algorithm for a generalization of the split delivery vehicle routing problem *Juan José Salazar González and Beatriz Santos Hernández*	Mo.B4 : 17:00 – 17:20 A Branch-Cut-and-Price Algorithm for the Piecewise Linear Transportation Problem *Tue R.L. Christensen and Martine Labbé*
Mo.A4 : 17:20 – 17:40 A MILP-based Column Generation Strategy for Solving Ship Routing and Scheduling Problems *Mariana Coccola, Rodolfo Dondo and Carlos Méndez*	Mo.B4 : 17:20 – 17:40 Generalized Approaches for Single- and Multi-Criteria Kidney Exchange Problems *Filipe Alvelos, Xenia Klimentova, Ana Viana and Abdur Rais*

Talks

Tuesday 9

Tu.A1 : Transportation and Logistics I	Tu.B1 : Scheduling I
Tu.A1 : 09:00 – 09:20 Integrating timetabling and vehicle scheduling for transit networks: tradeoff between passengers transfers and fleet size *Omar Ibarra-Rojas, Yasmin Rios-Solis and Ricardo Giesen*	Tu.B1 : 09:00 – 09:20 Energy-aware workflow scheduling in datacenters *Sergio Nesmachnow, Bernabe Dorronsoro and Pascal Bouvry*
Tu.A1 : 09:20 – 09:40 An integrated model for solving an assignment and vehicle scheduling problem *Maria Gulnara Baldoquin de La Peña, Jessica González and Alvaro Rengifo*	Tu.B1 : 09:20 – 09:40 Energy Aware Scheduling Mandatory/Optional tasks in Multicore Real-Time Systems *Isabel Mendez-Diaz, Paula Zabala, Rodrigo Santos and Javier Orozco*
Tu.A1 : 09:40 – 10:00 A bus scheduling model for a public transportation system in Quito *Luis M. Torres, Ramiro Torres, Miguel Flores, Raúl Pineda and Elizabeth Zuñiga*	Tu.B1 : 09:40 – 10:00 Multiobjective scheduling with service levels in heterogeneous computing systems *Sergio Nesmachnow and Jonathan Muraña*
Tu.A2 : Transportation and Logistics II	**Tu.B2 : Scheduling II**
Tu.A2 : 11:30 – 11:50 Particle Swarm Optimization based heuristic for transit network design *Agustín Arizti, Antonio Mauttone and Maria E. Urquhart*	Tu.B2 : 11:30 – 11:50 An iterated greedy algorithm for the partial job shop scheduling problem *Tadeu Zuabaran and Marcus Ritt*
Tu.A2 : 11:50 – 12:10 Building train schedules from frequency maps *Alejandro Zarzo, David Canca, Francisco Ortega and Eva Barrena*	Tu.B2 : 11:50 – 12:10 Solving single batch processing machine problem using symmetry-breaking constraints *Renan Trindade, Olinto de Araújo, Felipe Müller and Marcia Fampa*
Tu.A2 : 12:10 – 12:30 A sequential approach to Rolling Stock management in Railway Rapid Transit Systems *David Canca, Eva Barrena, Gilbert Laporte, Juan Antonio Mesa and Alejandro Zarzo*	Tu.B2 : 12:10 – 12:30 Simultaneous planning and scheduling of multistage multiproduct batch plants with non-identical parallel units and sequence-dependent changeovers *Yanina Fumero, Gabriela Corsano and Jorge Marcelo Montagna*

Tu.A3 : Graphs and Theoretical Aspects I	Tu.B3 : Branch and Cut and Price II
Tu.A3 : 14:30 – 14:50 NP-hardness of the computation of a median equivalence relation in classification *Olivier Hudry*	Tu.B3 : 14:30 – 14:50 A cutting plane algorithm for bounding a strategic pricing problem in electricity markets *Marcia Helena Costa Fampa and Wagner Pimentel*
Tu.A3 : 14:50 – 15:10 How unique is Lovasz's theta function? *Arnaud Pêcher, Oriol Serra, Annegret Wagler and Xuding Zhu*	Tu.B3 : 14:50 – 15:10 A Relax-and-Cut Algorithm for Generating Upper and Lower Bounds for the Quadratic Knapscak Problem *Jesus Ossian Cunha, Luidi Gelabert Simonetti and Abilio Pereira Lucena*
Tu.A3 : 15:10 – 15:30 Structural versus nonstructural irregularity measures *Paulo Boaventura-Netto*	Tu.B3 : 15:10 – 15:30 Channel assignment in wireless networks as distance-constraint graph coloring problems *Rosiane de Freitas, Bruno Dias, Nelson Maculan and Jayme Szwarcfiter*
Tu.A4 : Metaheuristics II	**Tu.B4 : Polyhedral Combinatorics II**
Tu.A4 : 16:00 – 16:20 Ant Colony Algorithms to Solve the Outsourcing Enabled Problem with Setup-Dependent Single Machine Scheduling *Giuliano Frascatti, Roberto Tavares Neto and Marcelo Seido Nagano*	Tu.B4 : 16:00 – 16:20 A general cut-generating procedure for the stable set polytope *Ricardo Corrêa, Ivo Koch and Javier Marenco*
Tu.A4 : 16:20 – 16:40 A metaheuristic approach to increase security in a utility network *Jochen Janssens, Luca Talarico and Kenneth Sörensen*	Tu.B4 : 16:20 – 16:40 Appointments on the spanning tree polytope *Rafael Andrade*
Tu.A4 : 16:40 – 17:00 Improving Harmony Search Algorithm that Solves Sudoku *Nicolas Rojas and Maria Cristina Riff*	Tu.B4 : 16:40 – 17:00 On identifying code polyhedra of families of suns *Gabriela Argiroffo, Silvia Bianchi and Annegret Wagler*

Talks

Wednesday 10

We.A1 : Transportation and Logistics III	We.B1 : Network Flows and Packing
We.A1 : 09:00 – 09:20 An OvS-MultiObjective Algorithm Approach for Lane Reversal Problem *Enrique Gabriel Baquela and Ana Carolina Olivera*	We.B1 : 09:00 – 09:20 Approximate resolution of a multi-commodity network flow problem with non-convex routing costs *Jose L. Andrade-Pineda, Pedro L. Gonzalez-R and David Canca*
We.A1 : 09:20 – 09:40 Cargo consolidation and distribution in urban areas *Rodolfo Dondo*	We.B1 : 09:20 – 09:40 An adaptation of the Ford-Moore-Bellman algorithm to shortest path problems in colored graph *Juliana Verga, Akebo Yamakami, Ricardo Coelho and Wesley Vagner Inês Shirabayashi*
We.A1 : 09:40 – 10:00 Decision support for flexible liner shipping *Johan Oppen*	We.B1 : 09:40 – 10:00 An Exact Approach for the Two-Dimensional Bin Packing Problem *Mohamed Haouari and Meftahi Ines*
We.A2 : Scheduling III	**We.B2 : (Not established)**
We.A2 : 11:30 – 11:50 Heterogeneous workforce in job shop scheduling *Alexander J. Benavides, Marcus Ritt and Cristóbal Miralles*	We.B2 : 11:30 – 11:50 (Not established)
We.A2 : 11:50 – 12:10 Contract and Scheduling in large-scale corporations *Pablo Romero, Franco Robledo, Patricia Bevilacqua and Martín Delafuente*	We.B2 : 11:50 – 12:10 (Not established)
We.A2 : 12:10 – 12:30 Surgical scheduling over the short-term horizon *Thiago Silva, Virgínia Casagrande, Mauricio C. De Souza and Edmund Burke*	We.B2 : 12:10 – 12:30 (Not established)

We.A3 : Vehicle Routing III	We.B3 : Natural Resource Management
We.A3 : 14:30 – 14:50 Heuristic algorithms for a three-dimensional loading capacitated vehicle routing problem *Leonardo Junqueira and Reinaldo Morabito*	We.B3 : 14:30 – 14:50 Solution methods for underground mine scheduling *Marco Schulze and Jürgen Zimmermann*
We.A3 : 14:50 – 15:10 A HBMO Algorithm for the Capacitated Arc Routing Problem *Cristian Martínez, Irene Loiseau, Mauricio Resende and Silvia Rodríguez*	We.B3 : 14:50 – 15:10 A network-flow based procedure for scheduling trains in an underground mine *Mario Ahumada and Eduardo Moreno*
We.A3 : 15:10 – 15:30 Two mathematical models for the Periodic Capacitated Arc Routing Problem *Guilherme Vinicyus Batista and Cassius Tadeu Scarpin*	We.B3 : 15:10 – 15:30 Resource allocation in Pastoral Dairy Production Systems *Gastón Notte, Martín Pedemonte, Hector Cancela and Pablo Chilibroste*
We.A3 : 15:30 – 15:50 Gain sharing in a collaborative selective vehicle routing problem *Christof Defryn, Kenneth Sörensen and Trijntje Cornelissens*	We.B3 : 15:30 – 15:50 A Multicriteria Optimization Model for Forestry Management under Climate Change Uncertainty *Eduardo Álvarez-Miranda, Jordi García-Gonzalo, Felipe Ulloa-Fierro and Andrés Weintraub*
We.A4 : Graphs and Theoretical Aspects II	**We.B4 : Other applications II**
We.A4 : 16:20 – 16:40 On the complexity of the {k}-packing function problem *María Patricia Dobson, Erica G. Hinrichsen and Valeria Leoni*	We.B4 : 16:20 – 16:40 Application of an independent set of vertices for human resources optimization and sales maximization *Matías Barros, Lorena Pradenas, Rodrigo Linfati, Thierry Mautor, Bertrand Le Cun and Víctor Parada*
We.A4 : 16:40 – 17:00 Incidence coloring of planar graphs without short cycles *Andre Raspaud, Hervé Hocquard and Samia Kerdjoudj*	We.B4 : 16:40 – 17:00 An Integer Programming Model for Scheduling Classes at the Escuela Politécnica Nacional in Quito *María Belén Heredia Guzmán and Luis M Torres*
We.A4 : 17:00 – 17:20 The Labelled Domination Problem for Distance-hereditary Graphs *Gabriela Argiroffo, Valeria Leoni and Pablo Torres*	We.B4 : 17:00 – 17:20 A two echelon multicommodity hybrid capacitated cost optimization model for facility location *Arnaldo R.A. Vallim Filho*
We.A4 : 17:20 – 17:40 Two Approximation Algorithms for Clique Transversal on Line Graphs *Min Chih Lin and Saveliy Vasiliev*	We.B4 : 17:20 – 17:40 A simple method to solve the lot sizing with supplier selection problem *Leopoldo Eduardo Cárdenas-Barrón, José Luis González-Velarde and Gerardo Treviño-Garza*