



**SCRO-JOPT / CORS-OPTD, Québec 2001**  
6 - 9 mai/May 2001

## **Programme préliminaire / Tentative Program**

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**Dimanche / Sunday, 6 mai / May 2001**

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- 16h00 Accueil et inscription / Welcome and Registration
- 18h30 Allocutions d'ouverture / Opening Speeches
- 19h00 Cocktail de bienvenue / Welcoming Cocktail



**Lundi / Monday, 7 mai / May, 2001**

08h00 Accueil et inscription / Welcome and Registration

08h30 Session plénière / Plenary Lecture LU – 1 :

MGén. Douglas L. Demspter  
Assistant Chief of Land Staff,  
Department of National Defense, Canada

PRESIDENT / CHAIR : Denis Faubert, Director General  
Defense Research Establishment Valcartier, Canada

*Operations research in support of army strategic  
management*

09h30 Pause santé / Break

10h00 Sessions parallèles / Parallel Sessions

**Session LU – A1 : COE Projects I**

PRÉSIDENT / CHAIR : Ossama KETTANI  
Université Laval, Canada

TANG, Kevin, KOLBUCK, Kalthryn, LIN, Claire, GOTO, Jason,  
GLENN, David  
University of British Columbia, Canada

Resource Allocation at the Compensation Services Division of  
the Workers' Compensation Board of British Columbia

BEGEN, Mehmet Atilla, MORRISON, Laura, GLENN, David,  
PUTERMAN, Martin L.  
University of British Columbia, Canada

Catch Allocation at JS McMillan Fisheries Ltd

JHA, Sumant, FOWLER, Ellen, PUTERMAN, Martin L.  
University of British Columbia, Canada

Role of B2B Internet Commerce Towards Information Sharing  
in a Supply Chain

TSE, Stanley, SMITH, Isabelle, GLENN, David, PUTERMAN,  
Martin L.  
University of British Columbia, Canada

Demand Forecasting for Whistler Blackcomb Ski and  
Snowboard School

**Session LU – A2 : Military Applications I**

PRÉSIDENT / CHAIR : Kevin NG  
Département de National Defence, Canada  
Faculty of administration, University of Ottawa, Canada

BENOIT, Patricia  
Department of National Defence, Canada

Extensions of Optimal Engagement Modeling

MACLEAN, Debbie  
Department of National Defence, Canada

Distance Requirements for Strategic Airlift and Sea lift  
Capabilities

STEMATE, Luminita  
Department of National Defence, Canada

Multi Objective Optimization to Improve the Maintenance  
Process of the CF-18's Engines

NG, Kevin Y.K.<sup>1,2</sup>, GHANMI, Ahmed<sup>1</sup>  
(1) Department of National Defence, Canada, (2) Faculty of administration, University  
of Ottawa, Canada

An Automated Surface Surveillance System

**Session LU - A3 : Gestion de projet / Project Management**

PRESIDENT / CHAIR : Gilles D'AVIGNON  
Université Laval, Canada

URLI, Bruno<sup>1</sup>, MARTEL Jean-Marc<sup>2</sup>, GUITOUNI, Adel<sup>3</sup>  
(1) Université du Québec à Rimouski, Canada, (2) Université Laval, Canada, (3)  
Centre de Recherches pour la Défense (Valcartier), Canada

La Génération de suites d'actions: une approche basée sur la  
gestion de projet

GAGNON, Michel, D'AVIGNON, Gilles  
Université Laval, Canada

An Interactive Procedure with Heuristics to Solve the  
Multiobjective Resource Constrained Project Scheduling  
Problem

BREDILLET Christophe  
ISGI – Lille Graduate School of Management, France

Vers la définition d'un corpus de connaissance global en  
management de projet



ROY, Jean G.  
Gouvernement du Canada, Canada

Quelques considérations pour la planification de grands projets

**Session LU - A4 : Queuing Theory and Applications**

PRÉSIDENT / CHAIR : Attahiru S. ALFA  
University of Windsor, Canada

LI, Hui, HE, Qi-Ming  
Dalhousie University Halifax, Canada

Ergodicity of the MMAP[K]/G[K]/1/LCFS Preemptive Repeat Queue and the M/G/1 Type Markov Chains with a Tree Structure

SAPNA, Kandyan  
Wilfrid Laurier University, Canada

A Finite Capacity GI/M/1->M/1 Queue

RAY, Saibal, JEWKES, Elisabeth M.  
University of Waterloo, Canada

Lead Time Management With two Prioritized Classes of Price and Lead Time Sensitive Customers

ALFA, Attahiru S<sup>1</sup>, CHEN, Jingshao<sup>2</sup>  
(1) University of Windsor, Canada, (2) University of Manitoba, Canada

Matrix-Geometric Solution for Discrete-Time Task Oriented Priority Queues

**Session LU - A5 : AHP and DEA**

PRÉSIDENT / CHAIR: Larry JENKINS  
Royal Military College of Canada, Canada

ISLAM, Rafikul  
International Islamic University, Malaysia

Prioritization of Ideas in an Affinity Diagram by AHP

SAHUBAR, Ali Mohd Nadhar Khan<sup>1</sup>, ADLI, Mustafa<sup>2</sup>  
(1) Northern University of Malaysia, Malaysia, (2) University Science Malaysia, Malaysia

A Unified Framework for Academic Staff Evaluation in Institution of Higher Education: An Integrative Use of AHP and DEA

DE MELLO, João Carlos Soares<sup>1</sup>, LINS, Marcos Pereira Estellita<sup>2</sup>  
(1) Universidade Federal Fluminense, Brazil, (2) Universidade Federal do Rio de Janeiro, Brazil

Smoothing Corners in a Bidimensional DEA Border

JENKINS, Larry, ANDERSON, Murray  
Royal Military College of Canada, Canada

Statistical Pre-Processing to Reduce the Number of Variables in Data Envelopment Analysis

**Session LU - A6 : Mathematical Programming I**

PRÉSIDENT / CHAIR : Richard J. CARON  
University of Windsor, Canada

TERLAKY, Tamás  
McMaster University, Canada

Algorithms for Linear Optimization: From Pivot Algorithms to Interior Point Methods

HO, Jackie, TUNCEL, Levent  
University of Waterloo, Canada

Complexity of Solving LPs and Generalization of Tardos' Theorem

HOLDER, Allen  
Dept. of Mathematics, Trinity University, Canada

Asymptotic Solution Analysis

ELHEDHLI, Samir, GOFFIN, Jean-Louis  
McGILL University, Canada

An Analytic Center Branch-and-Price Algorithm

**Session LU - A7 : Vehicle Routing I**

PRESIDENT / CHAIR : Jean BERGER  
Defence Research Establishment Valcartier, Canada

Sami GABTENI  
Carmen Systems AB

Column Generation Applied to AC Routing. Difficulties and Achievements

CHO, Richard K., BOOKBINDER, Jim  
University of Waterloo, Canada

Cost Allocation in Vehicle Routing Problems



BERGER, Jean, BARKAOUI, Mohamed  
Defence Research Establishment Valcartier, Canada

Some Improved Hybrid Genetic Algorithms for the Vehicle Routing Problem With Time Windows

GZARA, Fatma, GOFFIN, Jean Louis  
McGILL University, Canada

The Vehicle Routing Problem: a Novel Solution Approach

**Session LU - A8 : Optimisation Issues**

PRESIDENT / CHAIR : Benjamin SMITH

École Polytechnique de Montréal, Canada

BAKER, Kenneth R<sup>1</sup>, MAGAZINE, Michael J<sup>2</sup>, POLAK, George G<sup>3</sup>, SHEN, Yuelin<sup>2</sup>  
(1) Dartmouth College, USA, (2) University of Cincinnati, USA, (3) Wright State University, USA

Models for Cohort Timetabling

POLAK, George G<sup>1</sup>, COHN, Amy Mainville<sup>2</sup>, MAGAZINE, Michael J<sup>3</sup>.  
(1) Wright State University, USA, (2) Massachusetts Institute of Technology, USA, (3) University of Cincinnati, USA

Clustering by Process Commonality

ANEJA, Yash<sup>1</sup>, NAIR, K.P.K.<sup>2</sup>, CHANDRASEKARAN, R.  
(1) University of Windsor, Canada (2) University of New Brunswick, Canada

Parametric Min-Cuts Analysis in a Network

12h00 Déjeuner / Lunch : *rencontre CRSNG - Génie Industriel / NSERC – Industrial Engineering Meeting*

13h30 Session plénière / Plenary Lecture LU-2 :  
Hugues St-Onge

PRESIDENT / CHAIR : Adel GUITOUNI  
Centre de recherches pour la défense Valcartier, Canada

**Hydro-Québec : une entreprise de plus en plus performante**

Directeur Plan et programmes d'équipements de production,  
Hydro-Québec, Canada

14h30 Sessions parallèles / Parallel Sessions

**Session LU - B1 : Concours de la pratique SCRO / CORS Practice Competition**

PRESIDENT / CHAIR : Gilbert LAPORTE

Centre de recherche sur les transports, Canada

BOURJOLLY, Jean-Marie<sup>1</sup>, DÉJOIE, Leslie<sup>2</sup>, DING, Ke, DIOUME, Oumar<sup>2</sup>, LOMINY, Michel<sup>2</sup>  
(1) Concordia University, Canada, (2) PRESTIGE TELECOM LTD, Canada

DOCAF (TM): A Commercial Software Package for Frequency Allocation in Cellular Phone Networks

ERKUT, Erhan<sup>1</sup>, KABANUK, Steven, FENSKE, Russ, DAVIS, Jerry  
University of Alberta, Canada

Improving the Emergency Service Delivery in St. Albert

**Session LU - B2 : Forestry Applications I**

PRESIDENT / CHAIR : David MARTELL

University of Toronto, Canada

PELKKI, Matthew H<sup>1</sup>, ARTHAUD, Greg J<sup>2</sup>.  
(1) The University of Kentucky, USA, (2) Yale University, USA

The Sufficiency of n-state Dynamic Programming Networks in Forest Stand Optimization

WEINTRAUB, Andres<sup>1</sup>, GOYCOOLEA, Marcos<sup>1</sup>, EPSTEIN, Rafael<sup>1</sup>, BARAHONA, Francisco<sup>2</sup>, MURRAY, Alan<sup>3</sup>  
(1) University of Chile, Chile, (2) IBM Research Center, USA, (3) Ohio State University, USA

A Branch and Price Approach for a Difficult Combinatorial Problem in Spatial Forestry

VALERIA, Osvaldo, LEBEL, Luc, LOWELL, Kim  
Université LAVAL, Canada

A Decision Support Tool for Variable Patch Size Forest Management



**Session LU - B3 : Health Care Applications**

PRÉSIDENT / CHAIR : John BLAKE  
Management Consultant, Canada

CARTER, Michael  
University OF Toronto, Canada

Managing Home Care Resource Utilization & Waiting Lists

NEUMAN, Christopher  
University OF Toronto, Canada

Modelling Human Resource Needs in Nursing

BLAKE, John, DONALD, Joan  
Management Consultant, Canada

Operating Room Allocation at Mount Sinai Hospital with Integer Programming

**Session LU - B4 : Heuristics and Optimisation Issues**

PRÉSIDENT / CHAIR : Jacques RENAUD  
Télé-Université, Canada

PIMENTEL, Ana Lúcia Gouveia<sup>1</sup>, LUCENA, Abílio<sup>2</sup>, MACULAN Nelson<sup>2</sup>, LOPES PEREIRA, Amaranto<sup>2</sup>  
(1) LAAS du CNRS, (2) Universidad Federal do Rio de Janeiro.

Une approche heuristique pour la génération des rotations des Equipages Dans les Compagnies Aériennes

EL MOUDANI, Walid<sup>1</sup>, MORA-CAMINO, Félix<sup>2</sup>  
(1) LAAS du CNRS, France, (2) ENAC / DGAC, France

A Soft Approach to Solve the Airlines Crew Rostering Problem

AUDET, Charles, DENNIS, John  
(1) École Polytechnique de Montréal, Canada (2) Rice University, USA

A pattern Search Filter Method for Nonsmooth Optimization under General Constraints

**Session LU - B5 : Preference Modeling (Tutorial)**

PRÉSIDENT / CHAIR : Patrice PERNY  
Université Paris 6, France

BARZILAI, Jonathan  
Dalhousie University, Canada

Preference Function Modeling - Theory and Software Demonstration

**Session LU - B6 : Mathematical Programming II (Tutorial)**

PRÉSIDENT / CHAIR : Pascal LANG  
Université Laval, Canada

KRISTJANSSON, Bjarni  
Maximal Software, Inc, USA

Using the MPL Modeling System and the OptiMax 2000 Component Library to Create Embedded Optimization Applications

**Session LU - B7 : Travel Salesmen and Purchasing Problem**

PRÉSIDENT / CHAIR : Fayez BOCTOR  
Université Laval, Canada

GODART, Jean-Marc  
Université de Mons-Hainaut, Belgium

Trip Planning: From The T.S.P. to The T.P.P.

KABADI, Santosh N., PUNNEN, A.  
University of New Brunswick, Canada

The Bottleneck Traveling Salesman Problem: Analysis of Approximation Algorithms and New Solvable Cases

BOCTOR, Fayez F<sup>1</sup>, LAPORTE, Gilbert<sup>2</sup>, RENAUD, Jacques<sup>3</sup>  
(1) Université Laval, Canada, (2) Centre de recherche sur les transports, Canada, (3) Télé-université, Canada

Perturbation Heuristics for the Capacitated and Uncapacitated Traveling Purchaser Problem

**Session LU - B8 : Optimisation Issues in Wireless Networks**

PRÉSIDENT / CHAIR : Jeannette JANSSEN  
Dalhousie University, Canada

GALTIER, Jérôme, OLIVEIRA, Adriana  
Trinity University Mathematics, Canada

A Proposal to Study Satellite Constellation Routing Via Classical Linear Programming Methods

GRAEF, Albert

New Methods In Digital Broadcast Network Planning



JANSSEN, Jeannette, SCHMEISSER, Kyle  
Dalhousie University, Canada

Algorithms and Lower Bounds for Channel Assignment in  
Digital Broadcast Networks

16h00 Pause café/ Break

16h15 Sessions parallèles / Parallel Sessions

**Session LU - C1 : Conseil SCRO / CORS Council**

PRESIDENT / CHAIR : Bernard LAMOND  
Université Laval, Canada

**Session LU - C2 : Military Applications II**

PRESIDENT / CHAIR : W.J. HURLEY  
Royal Military College of Canada, Canada

FONG, Van, BURTON, Bob  
Dept of National Defence, Canada

Analysis of Mine Defence Systems for the ALSC

GHANMI, Ahmed, WHEATON, Kendall  
Department of National Defence, Canada

Improving Peacekeeping Operations Through Lessons  
Learned Analysis

HERMANSEN, Eric  
Department of National Defence, Canada

Development of Process Models to Manage Command and  
Control Complexity

FINAN, J.S., HURLEY, William J.  
Royal Military College of Canada, Canada

McNaughton and Canadian Operational Research at Vimy

**Session LU - C3 : Risk Theory**

PRÉSIDENT / CHAIR : Steve DREKIC  
University of Waterloo, Canada

MARCEAU, Étienne  
Université LAVAL, Canada

Applications of Dependence Models in Risk Theory

STANFORD, David  
University of Western Ontario, Canada

Ruin Theoretic Computations Based on Recursions at Claim  
Instants

WILLMOT, Gordon  
University of Toronto, Canada

Stop-Loss Moments of Compound Geometric Distributions

DREKIC, Steve  
University of Waterloo, Canada

Using Symbolic Computation to Derive Moments of the Time  
of Ruin

**Session LU - C4 : Choice and Allocation**

PRÉSIDENT / CHAIR : John G. WILSON  
University of Western, Canada

ARMSTRONG, M.J., SHEPHERD, D.A.<sup>1</sup>, LÉVESQUE, Moren<sup>1</sup>  
(1) Rensselaer Polytechnic Institute, USA

Allocation of Attention within Venture Capital Firms: A  
Queuing Network Model

CHOI, Y.R, LÉVESQUE, Moren<sup>1</sup>, SHEPHERD, D.A.<sup>1</sup>  
(1) Rensselaer Polytechnic Institute, USA

Exploration or Exploitation? An Optimal Stopping Model for  
New Venture Opportunities

WILSON, John G., ANDERSON, Chris K.  
University of Western, Canada

Bayesian Approaches to Forecasting and Airline Discount  
Seat Allocation

ANDERSON, Chris K., WILSON, John G.  
University of Western, Canada

Wait or Buy: The Consumer's Airline Seat Purchase Decision



**Session LU - C5 : Multiobjective Programming**

PRÉSIDENT / CHAIR : Belaïd AOUNI  
Université Laurentienne, Canada

AOUNI, Belaïd, GANJAVI, Ozhand  
Laurentian University, Canada

Achieving Balanced Solution in Multi-Objective Programming

KARASAKAL, Esra Koktener  
University of Ottawa, Canada

An Interactive Procedure for Multiobjective Linear Programming Problems Using Vector Maximization

GALPERIN, Efim A.<sup>1</sup>, GUERRA, Pedro Jimenez  
Université du Québec à Montréal, Canada

Duality in Nonscalarized Multiobjective Linear Programs: Dual Balance and Level Sets and Dual Clusters of Optimal Vectors

LAHIRI, Somdeb  
Indian Institute of Management, India

Vector Optimization with Multiple Constraints

**Session LU - C6 : Programmation Mathématique III / Télécommunication**

PRÉSIDENT / CHAIR : Abdelhamid BENCHAKROUN  
Université de Sherbrooke, Canada

BENCHAKROUN, Abdelhamid, CARON, Philippe, DION, Jean-Guy  
Université de Sherbrooke, Canada

Algorithmes efficaces pour la résolution exacte du problème global de coupe unidimensionnelle

EL YASSINI, Khalid<sup>1</sup>, BENCHAKROUN, Abdelhamid<sup>2</sup>  
(1) Collège université de Saint-Boniface, Canada, (2) Université de Sherbrooke, Canada

Analyse d'un nouvel algorithme prédicteur-correcteur primal-dual pour les problèmes de la programmation quadratique convexe

HEMAZRO, Tekogan<sup>1</sup>, JAUMARD, Brigitte<sup>2</sup>  
(1) École Polytechnique de Montréal, Canada, (2) École Polytechnique de Montréal et CRT, Canada

La planification des Pn-Offset dans les systèmes CDMA basés sur LS-95

DUSSAULT, Jean Pierre, GUEYE, Oumar Mandione  
Université de Sherbrooke, Canada

Lagrangien augmenté séparable avec plusieurs paramètres : application au problème de multiflot

**Session LU - C7 : Vehicule routing II**

PRÉSIDENT / CHAIR : Jean-Yves POTVIN  
Centre de recherche sur les transports, Canada

GENDREAU, Michel, LAPORTE, Gilbert  
Centre de recherche sur les transports, Canada

Local Tabus in Vehicle Routing Heuristics

LE BOUTHILLIER, Alexandre<sup>1</sup>, CRAINIC, Teodor Gabriel<sup>2</sup>, KELLER, Rudolf<sup>1</sup>  
(1) Université de Montréal, Canada, (2) Centre de recherche sur les transports, Canada

Parallel Cooperative Evolutionary Algorithm for Vehicle Routing Problems With Time Windows

ICHOUA, Soumia<sup>1</sup>, GENDREAU, Michel<sup>2</sup>, POTVIN, Jean-Yves<sup>2</sup>.  
(1) Université de Montréal, Canada, (2) Centre de recherche sur les transports, Canada

Integrating Knowledge about Future Customer Requests for Real-Time Vehicle Routing and Dispatching

LELOUARN, François-Xavier<sup>1</sup>, GENDREAU, Michel<sup>2</sup>, POTVIN, Jean-Yves<sup>2</sup>  
(1) Université de Montréal, Canada, (2) Centre de recherche sur les transports, Canada

GENI Ants for the Traveling Salesman Problem

**Session LU - C8 : Constraint Programming**

PRÉSIDENT / CHAIR : Gilles PESANT  
Centre de recherche sur les transports, Canada

ANDRÉ, Mathieu<sup>1</sup>, AMOUSSOU, Grace<sup>1</sup>, PIERRE, Samuel<sup>1</sup>, PESANT, Gilles<sup>1,2</sup>  
(1) École Polytechnique de Montréal, Canada, (2) Centre de recherche sur les transports, Canada

An Exact Constraint Programming Algorithm for the Assignment of Cells to Switches in a Mobile Communication Network

DUCHARME Alain<sup>1,2</sup>, PESANT, Gilles<sup>1,2</sup>, SORIANO, Patrick<sup>1,3,4</sup>  
(1) Centre de recherche sur les transports, Canada (2) École Polytechnique de Montréal, Canada (3) GERAD (4) École des hautes études commerciales, Canada

Applying Constraint Programming to the Frequency Allocation Problem with Cumulative Interference



MORALES, Rodrigo<sup>1</sup>, JAUMARD, Brigitte<sup>1</sup>, PESANT, Gilles<sup>1</sup>,  
GALINIER, Philippe<sup>1</sup>  
(1) École Polytechnique de Montréal et CRT, Canada.

The Golomb Ruler Problem Modelled by Constraint Programming

ROUSSEAU, L.M.<sup>1,2</sup>, GENDREAU, Michel<sup>1,2</sup>, PESANT, Gilles<sup>1,3</sup>  
(1) Centre de recherche sur les transports, Canada (2) Université de Montréal (3)  
École Polytechnique de Montréal.

Using Constraint Programming and Column Generation to solve the Vehicle Routing Problem with Time Windows

18h00 Fin des travaux de la première journée / End of the First Day

19h00 Vin et fromage des JOPT / OPTD Wine and Cheese



Mardi / Tuesday, 8 mai / May, 2001

08h00 Accueil (café) / Welcome (coffee)

08h30 Session plénière Larnder MA-1 :  
Larnder Plenary Lecture

Dr. Ward Whitt  
AT&T Labs, USA

PRÉSIDENT / CHAIR : Bernard LAMOND  
Université Laval, Canada

*Experiencing Statistical Regularity*

09h30 Pause santé / Break

10h00 Sessions parallèles / Parallel Sessions

**Session MA – A1 : Concours du meilleur article étudiant SCRO / CORS Best Student Paper Competition**

PRESIDENT / CHAIR : Michael CARTER  
University of Toronto, Canada

BISWANGER, Kyle  
University of British Columbia, Canada

Developing an Airline Network Inventory Control Policy Using Markov Decision Processes and Simulation

COOKE, David L.  
University of Calgary, Canada

A System Dynamics Analysis of the Westray Mine Disaster

ELHEDHLI, Samir  
McGill University, Canada

The Integration of Interior-Point Cutting Plane Methods within Branch-and-Price Algorithms

PERRIER, Nathalie  
École Polytechnique de Montréal, Canada

Le problème du postier chinois mixte avec pénalités pour les virages

**Session MA – A2 : Military Applications III**

PRÉSIDENT / CHAIR : Kendall WHEATON  
Département de National Defense, Canada

CHAN, Jim S.F.  
Department of National Defence, Canada

Development of a Generic Analysis Process Model to Assess Workflow Characteristics

KARASAKAL- Orhan<sup>1</sup>, KARASAKAL, Esra Koktener<sup>2</sup>  
(1) Department of National Defense, Canada, (2) University of Ottawa, Canada

Locating the Search and Rescue Bases in the Presence of Partial Coverage

REDING, Dale, NGUYEN- Bao  
Department of National Defense, Canada

Optimal Placement of Electro-Optical Augmentation for Space Surveillance

AL-MUTAIRI, Dhaif K.  
Kuwait University, College of Science, Kuwait

Attrition through Partially Coordinated Area Defense

**Session MA - A3 : Integrating OR / MCDA in Managerial Activities**

PRESIDENT / CHAIR : Micheline BÉLANGER  
Centre de recherches pour la défense Valcartier, Canada

VAN GUNSTEREN, Lex. A.  
Delft University of Technology

The Challenge of Today: Integrating Operations Research into Decision. Making that Really Matters

DA SILVA, Augusto Sergio Mendes, GUTIERREZ, Ruben Huamanchumo  
UFF - Fluminense Federal University, Brazil

Multicriterial Don't Make Miracles: This is a Particular Review to the Multicriterial Model Used to Last Seven Years on the Brazilian Quality Award

FERNÁNDEZ BARBERIS, Gabriela Mónica  
Universidad San Pablo – CEU, Spain

The Decision Making Process in the Company. How the Multicriteria Decision Aid Allows the Effective Decision Making in the Managerial Environment



BELL, Peter C.<sup>1</sup>, ANDERSON, Chris K.<sup>2</sup>, KAISER, Stephen<sup>1</sup>  
(1) University of Western Ontario, Canada (2) University of Western, Canada

After the Edelman Competition; What Happened to the  
Finalist Applications?

**Session MA - A4 : Computational Procedures for Queues**

PRÉSIDENT / CHAIR : Yiqiang ZHAO  
Carleton University, Canada

GRASSMANN, Wingfried K., TAVAKOLI, Javad  
University of Saskatchewan, Canada.

A Two Station Tandem Queue

HORN, Wayne, STANFORD, David<sup>1</sup>  
(1) University of Western Ontario, Canada.

A Matrix Geometric Model of a Spatially Distributed Queuing  
System

HUR, Sun, JEONGHYEON, Kim  
Hanyang University, Korea

An analysis on the M/G/1 Queuing System with Three-Phase  
and Threshold

STANFORD, David<sup>1</sup>, SAPNA, Kandyan<sup>2</sup>  
(1) University of Western Ontario, Canada (2) Wilfrid Laurier University, Canada

An Infinite-phase Matrix Geometric Model for a Priority Queue

**Session MA - A5 : Measurement Theory**

PRÉSIDENT / CHAIR : Bernard ROY  
Université Paris-Dauphine, France

BARZILAI, Jonathan  
Dalhousie University, Canada

Basic Principles of Measurement

BARZILAI, Jonathan  
Dalhousie University, Canada

Properties of Affine Measurement Scales

BARZILAI, Jonathan  
Dalhousie University, Canada

The AHP is Not a Valid Methodology

**Session MA - A6 : Parallel Optimisation**

PRESIDENT / CHAIR : Teodor Gabriel CRAINIC  
Centre de recherche sur les transports, Canada

GENDRON, Bernard<sup>2</sup>, CRAINIC, Teodor Gabriel<sup>2</sup>, FRANGIONI,  
Antonio<sup>3</sup>, GUERTIN, François<sup>2</sup>  
(1) Centro Queretano de Recursos Naturales, Mexico, (2) Centre de recherche sur  
les transports, Canada, (3) Université di Pisa

Object-Oriented Tools for Easy Development of Parallel  
Branch-and-Bound Algorithms

TOULOUSE, Michel  
University of Manitoba, Canada

The Energy Function of Cooperative Multi-level Graph  
Partitioning Algorithms

CRAINIC, Teodor Gabriel  
Centre de recherche sur les transports

Co-operative Parallel Meta-heuristics

SOLAR, Mauricio, INOSTROZA, Mario  
Universidad de Santiago de Chile, Chile

A Scheduler for Parallel Shared-Memory Machines

**Session MA - A7 : Airlift Optimisation**

PRÉSIDENT / CHAIR : Gilles SAVARD  
École Polytechnique de Montréal, Canada

CROUZET, Sylvain, SAVARD, Gilles  
École Polytechnique de Montréal, Canada

Operational Rationality And Neighborhood Search

CHAUNY, Fabien<sup>1</sup>, RATSIRAHONANA, Léandre<sup>2</sup>  
(1) SMQ, École des HEC et GERAD, Canada, (2) École Polytechnique de Montréal,  
Canada

An Aggregate Formulation for the Aircraft Loading Problem

LE-GUEX, Lan<sup>1</sup>, RANCOURT, Éric<sup>2</sup>, SAVARD, Gilles<sup>2</sup>,  
WIZERE, Agnès<sup>1</sup>  
(1) GÉRAD – HEC, Canada, (2) École Polytechnique de Montréal, Canada

Strategic Airlift Scheduling at Air Mobility Forces

RANCOURT, Éric, SAVARD, Gilles  
École Polytechnique de Montréal, Canada

Mission Scheduling for a Tactical Helicopter Squadron



**Session MA – A8 : Scheduling**

PRÉSIDENT / CHAIR : George M. WHITE  
University of Ottawa, Canada

CAPRARA, Alberto<sup>1</sup>, MONACI Michele<sup>1</sup>, TOTH, Paolo<sup>1</sup>,  
FISCHETTI, Matteo<sup>2</sup>, GUIDA, Pier Luigi<sup>3</sup>, SACCO, Giuseppe<sup>3</sup>  
(1) DEIS - University of Bologna, Italy, (2) DEI - University of Padova, Italy, (3)  
Ferrovie dello Stato SpA, Italy

Heuristic Algorithms for Real-World Train Timetabling Problems

ISKANDER, Maged George  
The American University in Cairo, Egypt

Modeling Stochastic No Wait Flow-Shop Scheduling Problem Using Goal Programming Approach

WHITE, George M., XIE, Bill S., ZHANG, Junhan  
University of Ottawa, Canada

Using Extensions of Tabu Search to Optimize Complete University Timetables and Examination Schedules.

12h00 Déjeuner / Lunch : Assemblée générale annuelle de la SCRO / CORS Annual General Meeting

13h30 Session plénière IFORS MA – 2 :  
IFORS Distinguished Plenary Lecture

PRÉSIDENT / CHAIR : Jean-Marc MARTEL  
Université Laval, Canada

Prof. Bernard ROY  
Université Paris-Dauphine, France

*Robustness Analysis and Sensitivity Analysis in  
Operations Research*

14h30 Sessions parallèles / Parallel Sessions

**Session MA - B1 : IFORS Tutorial Project**

PRESIDENT / CHAIR : Laura LAUGAN  
Air Canada, Canada

SNIEDOVICH, Moshe  
University of Melbourne, Australia

OR/MS Tutorials on the WWW: An Overview of the IFORS Tutorial Project

**Session MA - B2 : Forestry Applications II**

PRESIDENT / CHAIR : Luc LEBEL  
Université Laval, Canada

LUSSIER, Louis-Jean

A Decision-Making System for Optimizing Forest Management Strategies in a Multiple-use Context

KIRILLOVA, Natalia V., PELKKI, Matthew H.  
University of Kentucky, Canada

Determining the Marginal Value of Thinning Strategies in Mixed Hardwood Forests in the Central Appalachians

LEBEL, Luc, MERCIER, Yves., MBAGA, Msafiri  
Université Laval, Canada

Technical Efficiency Evaluation of Silvicultural Operations Using a Linear Programming Based Technique (DEA)

**Session MA - B3 : Supply Chain Management**

PRESIDENT / CHAIR : David GLENN  
University of British Columbia, Canada

BOYACI, Tamer  
McGill University, Canada

Horizontal Inventory Competition between a Manufacturer and a Retailer: Understocking Behavior and Coordination Mechanisms

SOSIC, Greys, GRANOT, Daniel  
University of British Columbia, Canada

A Three-Stage Model of a Decentralized Distribution System of Retailers

GLENN, David, PUTERMAN, Martin L., BISI, Arnab  
University of British Columbia, Canada

Adaptive Inventory Control in a Two-Tier System



**Session MA – B4 : Multi-Agent Tutorial**

PRESIDENT / CHAIR : Irene ABI-ZEID  
Defense Research Establishment Valcartier, Canada

DESHMUKH, Abhijit  
University of Massachusetts, Amherst, USA

Multi-agent Systems

**Session MA – B5 : MCDA Applications I**

PRESIDENT / CHAIR : Laszlo N. KISS  
Université Laval, Canada

MOUSSEAU, Vincent<sup>1</sup> . FIGUEIRA, José<sup>2</sup>  
(1) LAMSADE, France, (2) University of Coimbra, Portugal

A Multiple Criteria Combinatorial Model to Partition a Territory Into "Homogenous" Zones: the Case of the Paris Region Subway.

BEKEFI, Zoltan,  
Polytechnical University of Budapest, Hungary

Multicriteria Analysis Of The Financial Feasibility Of Transport Infrastructure Projects

YANOFSKY, C.<sup>1</sup>. TAYLOR, D.<sup>1</sup>, THIBAUT, J.<sup>1</sup>, LANOUILLE, R.<sup>2</sup>, FONTEIX, C.<sup>3</sup>. KISS, Laszlo Nandor<sup>4</sup>, ZARAS, K.<sup>5</sup>  
(1) University of Ottawa, Canada, (2) Université du Québec à Trois-Rivières, (3) Laboratoire de Sciences du Génie Chimique, France, (4) Université Laval, Canada, (5) UQAT, Canada

Multicriteria Optimisation in the Pulp and Paper Industry

**Session MA - B6 : Mathematical Programming IV (Tutorial)**

PRÉSIDENT / CHAIR : Wilson PRICE  
Université Laval, Canada

PINTER, Janos D.  
Dalhousie University, Canada

Global Optimization-Software and Applications

**Session MA - B7 : Advances in Network Assignment Methods**

PRESIDENT / CHAIR : Michael FLORIAN  
Centre de recherche sur les transports, Canada

RUBIO-ARDANAZ, J.M., WU, J.H., FLORIAN, Michael  
Centre de recherche sur les transports, Canada

A Numerical Analytical Model for the Continuous Dynamic Network Equilibrium Problem with Limited Capacity and Spill Back

MAHUT, Michael<sup>1</sup>, FLORIAN, Michael<sup>1</sup>, TREMBLAY, Nicolas<sup>2</sup>  
(1) Centre de recherche sur les transports, Canada, (2) INRO Consultants, Canada

A Hybrid Optimization Mesoscopic Simulation Dynamic Traffic Assignment Model

COSTA Marie-Christine, LÉTOCART Lucas, ROUPIN, Frédéric

Multicut and Integral Multiflow Duality. A Polynomial Algorithm in Rooted Trees

**Session MA - B8 : Multicommodity Capacitated Fixed-Charge Network Design**

PRESIDENT / CHAIR : Bernard GENDRON  
Centre de recherche sur les transports, Canada

CHOUMAN, Mervat<sup>1</sup> . CRAINIC, Teodor Gabriel<sup>2</sup>, GENDRON, Bernard<sup>2</sup>  
(1) DIRO-CRT, Université de Montréal, Canada, (2) Centre de recherche sur les transports, Canada

Valid Inequalities for the Multicommodity Capacitated Fixed Charge Network Design Problem

GHAMLOUCHE, Ilfat<sup>1</sup>. CRAINIC, Teodor Gabriel<sup>2</sup>, GENDREAU, Michel<sup>2</sup>  
(1) Université de Montréal, Canada, (2) Centre de recherche sur les transports, Canada

Path Relinking Using Cycle-Based Neighborhoods for Fixed Charge Capacitated Multicommodity Network Design

GENDRON, Bernard, CRAINIC Teodor Gabriel, HERNU, Geneviève  
Centre de recherche sur les transports, Canada

A Combined Slope Scaling/Lagrangian Perturbation Heuristic for Multicommodity Capacitated Fixed-Charge Network Design

16h00 Pause santé / Break



16h15 Sessions parallèles / Parallel Sessions

**Session MA - C1 : Issues in Decision Support**

PRESIDENT / CHAIR : Jean-Marie BOURJOLLY

Concordia University, Canada

VAHIDOV, Rustam  
Concordia University, Canada

Facilitating Active Decision Support Through Automated Alternative Generation

BOURJOLLY, Jean-Marie. TOUHAMI, Souheyl  
Concordia University, Canada

On the Use of Simulated Annealing for the Frequency Assignment Problem in Mobile Cellular Networks

BOURJOLLY, Jean-Marie  
Concordia University, Canada

On a Tactical/Operational Production Planning Problem in Supply Chain Management: Balancing Inventory and Setup Costs

VAN LOON, Peter –Paul  
Delft University of Technology, The Netherlands

Operations Research in Building Design Engineering: A Multi-Stakeholder Design Support

**Session MA - C2 : Forestry Applications III**

PRÉSIDENT / CHAIR : Evelyn W. RICHARDS

University of New Brunswick, Canada

MARTELL, David L.  
University of Toronto, Canada

Incorporating Post Burn Salvage Decision-making into Forest Management Planning Systems

GUNN, Eldon  
Dalhousie University

Decision Approaches in Multi Stakeholder Forests

RICHARDS, Evelyn W.  
University of New Brunswick, Canada

Models to Support Forest Operational Planning

PARADIS, Gregory. RICHARDS, Evelyn W.  
University of New Brunswick, Canada

A Forest Landscape Generator

**Session MA - C3 : Stochastic and Fuzzy Models**

PRÉSIDENT / CHAIR : Foued BEN ABDELAZIZ

Université de Tunis, Tunisie

BEN ABDELAZIZ, Foued. MASRI, Hatem  
Université de Tunis, Tunisie

Stochastic Linear Programming with Fuzzy Information on Probability Distribution: A Chance Constrained Approach

BELACEL, Nabil . HANSEN, Pierre . MLADENOVIC, Nenad  
GERAD and École des Hautes Études Commerciales

Fuzzy J-Means: A New Approach for Fuzzy Clustering Problem

TAPIERO, Charles S<sup>1</sup>. FONTANE, Frederic<sup>2</sup>. HOUDAYER, Patrice<sup>2</sup>  
(1) ESSEC, France, (2) ESCEM, France

Incertitude de délais d'approvisionnement et contrôle d'inventaire : le cas à deux périodes et simple délai

**Session MA - C4 : Production**

PRÉSIDENT / CHAIR : Catherine ROUCAIROL

Université de Versailles, Canada

ENNS, S. T., CHOI, Sangjin  
University of Calgary, Canada

Multi-Item Capacitated Lot Sizing With Stochastic Arrivals

PIEDRAS, Hugo, YACOUT, Soumaya, SAVARD, Gilles  
École Polytechnique de Montréal, Canada

Optimization of Production Costs and Quality When a New Product is Developed

HASSINI, Elkafi, VICKSON, Raymond G.  
University of Waterloo, Canada

A Genetic Algorithm Approach for Product Location on Two-Carousel Systems

LENTÉ, Christophe  
Laboratoire d'Informatique de l'Université de Tours, France

Encadrement du Cmax d'un flowshop sous diverses contraintes via l'algèbre Max+



**Session MA - C5 : MCDA Methodological Issues**

PRÉSIDENT / CHAIR : Kazimier ZARAS

Université du Québec à Abitibi-Timiscamingue, Canada

GANJAVI, Ozhand<sup>1</sup>, AOUNI, Belaïd<sup>2</sup>, WANG, Zhijiang<sup>2</sup>  
(1) Laurentian University, Canada, (2) HUAQIAO University, China

Amplification Effect in Weight Assessment Derived from Subjective and Objective Estimates

NGO THE, An<sup>1, 2</sup>  
(1) Programme Doctorale ESSEC, France, (2) LAMSADE, France

New Results Concerning the Representation of Multiple Semiorders With Constant Thresholds

DE LA LLATA GÓMEZ, Roberto  
Centro Queretano de Recursos Naturales, Mexico

Obtaining the Potentially Optimal Set in the Discrete Multicriteria Problem

GUI TOUNI, Adel<sup>1</sup>, LANG, Pascal<sup>2</sup>, BÉLANGER, Micheline<sup>1</sup>  
(1) Centre de recherches pour la défense Valcartier, Canada, (2) Université Laval, Canada

A Weight Stability Analysis for a COA Selection Decision Support System

**Session MA - C6 : Economics and Optimisation Issues**

PRESIDENT / CHAIR : Michel GENDRON

Université Laval, Canada

MATURANA, Sergio. CONTESSE, Luis. ORTIZ, Alejandro  
Pontificia Universidad Católica de Chile, Chile

Optimizing the Transportation and Purchasing of Natural Gas for a Local Distribution Company in Chile

GUTIERREZ, Ruben Huamanchumo, DA SILVA, Augusto Sergio Mendes  
UFF - Fluminense Federal University, Brazil

Optimizing Costs of Materials to Produce Steel of Several Specifications: A Case from South America

GENDRON, Michel, LAI, Van Son, SOUMARÉ, Issouf  
Université Laval, Canada

The Risk of Private Loan Guarantees Portfolios

DA SILVA, Augusto Sergio Mendes. GUTIERREZ, Ruben Huamanchumo  
UFF - Fluminense Federal University, Brazil

Financial Risks and Costs on Cash Flow of Industrial Projects: A Case Analysis

**Session MA - C7 : Transport I**

PRÉSIDENT / CHAIR : Antoine GAUTIER

Université Laval, Canada

WYNTER, Laura  
Université de Versailles, France

Tarifcation optimale et "Network Design" d'un réseau multimodal de transport

BENCHAKROUN, Abdelhamid<sup>1</sup>, FERLAND, J.A.<sup>2</sup>, RAOUJ, Abdallah<sup>1</sup>  
(1) Université de Sherbrooke, Canada, (2) Universidad San Pablo - CEU

Un algorithme de point Intérieur pour résoudre le sous-problème des opérateurs dans le cadre d'un réseau de transport déréglementé

TEODOROVIC, Dusan<sup>1,2</sup>, LUCIC, Panta<sup>1</sup>  
(1) Virginia Polytechnic Institute, USA (2) Virginia State University, USA

Schedule Synchronization in Public Transit by Ant System and Fuzzy Logic

GAUTIER, Antoine<sup>1</sup>, D'AVIGNON, Gilles<sup>1</sup>, DELABY, Nicolas<sup>2</sup>  
(1) Université Laval, Canada, (2) Baan Canada Inc., Canada

Loading/Unloading Trucks: A Case of Acyclic Graph Reduction

**Session MA - C8 : COE Projects II**

PRÉSIDENT / CHAIR : Maurice QUEYRANNE

University of British Columbia, Canada

BAIRD, Sean, SIM, Thaddeus, KABANUK, Steve, QUEYRANNE, Maurice  
University of British Columbia, Canada

Optimal Network Dimensioning at TELUS

SIM, Thaddeus<sup>1</sup>, BAIRD, Sean<sup>1</sup>, KABANUK, Steve<sup>1</sup>, CHEN, Hong  
University of British Columbia, Canada

Trunk Reservation Research for TELUS' Lower Mainland Vancouver Network

SMITH, Isabelle, GOTO, Jason, PUTERMAN, Martin L.  
University of British Columbia, Canada

Identification of Potential Routes for Time of Day Routing at TELUS

LADAK, Omar, HECKROODT, Sheelah, BISWANGER, Kyle,

Decision Support for Transshipment Infrastructure



**SCRO-JOPT / CORS-OPTD, Québec 2001**  
6 - 9 mai/May 2001

JONES, Stephen, ATKINS, Derek  
University of British Columbia, Canada

Development at Vancouver International Airport

18h00 Fin des travaux de la deuxième journée / End of the Second Day

19h30 Banquet de la SCRO et remise des prix / CORS Banquet and Award Ceremony



Mercredi / Wednesday, 9 mai / May, 2001

08h00 Accueil (café) / Welcome (coffee)

08h30 Session plénière / Plenary Lecture ME – 1 :

DALE REDING

DIRECTOR,

DIRECTORATE OF OPERATIONS RESEARCH,  
DEPARTMENT OF NATIONAL DEFENCE, CANADA

PRÉSIDENT / CHAIR : Éloi BOSSÉ  
Defense Research Establishment Valcartier, Canada

*The Practice of OR in the Department of National  
Defence*

09h30 Pause café / Break

10h00 Sessions parallèles / Parallel Sessions

**Session ME – A1 : Teaching OR**

PRÉSIDENT / CHAIR : Peter BELL

University of Western Ontario, Canada

ERKUT, Erhan  
University of Alberta, Canada

ANDERSON, Chris K.  
University of Western, Canada

BELL, Peter C.  
University of Western Ontario, Canada

Integrating "OR" Into the Introductory Business Course

Teaching Financial Modeling with Excel

Teaching "OR" as a Business Course

**Session ME – A2 : Energy and Environment Management / Gestion énergétique et environnementale**

PRESIDENT / CHAIR : Michel ROLAND

Université Laval, Canada

TURGEON, André,  
Hydro-Québec / IREQ, Canada

LAFRANCE, Gaëtan<sup>1</sup>, LAFOND, Louis<sup>2</sup>, JACQUES, Christiane<sup>1</sup>  
(1) INRS-Énergie et Matériaux, Canada, (2) IREQ, Hydro-Québec, Canada

LABRIET, Maryse, LOULOU, Richard. KANUDIA, Amit  
GÉRARD - HEC, Canada

KHALAF, Lynda<sup>1</sup>, SAPHORES, Jean-Daniel<sup>2</sup>, BILODEAU,  
Jean-François<sup>3</sup>  
(1) Université Laval, Canada, (2) University of California, (3) Ministère des  
Ressources naturelles du Canada, Canada

Gestion Sécuritaire de Plusieurs Réservoirs en Série et en  
Parallèle

Integrating Wind Farm In An Electricity Grid

Modélisation MARKAL/TIMES des Stratégies Nationales et  
Internationales de Réduction des Gaz à Effet de Serre

Simulation-Based Exact Tests With Unidentified Nuisance  
Parameters Under the Null Hypothesis: The Case of Jump  
Tests in Models With Conditional Heteroskedasticity

**Session ME - A3 : Economics issues**

PRESIDENT / CHAIR : José FIGUEIRA

University of Coimbra, Portugal

ABRACHE, Jawad<sup>1</sup>, CRAINIC, Teodor Gabriel<sup>2</sup>, GENDREAU,  
Michel<sup>2</sup>  
(1) Université de Montréal, Canada, (2) Centre de recherche sur les transports

QUAN, Vinh<sup>1</sup>, ROGERS, Scott<sup>2</sup>  
(1) Ryerson University, Canada. (2) University of Toronto, Canada.

ZHAO, Zengyao, XI, Youmin  
The School of Management, Xi'an Jiaotong Univ, China

LAKHAL, Salem Y.<sup>1</sup>, H'MIDA, Souad<sup>2</sup>  
(1) Sultane Qaboos University, Oman (2) University of Moncton, Canada.

Auction Mechanisms for Freight Truckload Marketplaces

Advanced Intelligent Network Supply Chain II: Modelling  
Revenue Sharing Between Telco and Vendors

Reforming China's Corporate Governance

A Transfer Market-Driven Price For Industrial Complex  
Products: A Mathematical Programming Approach



**Session ME - A4 : Decision Support System and Stochastic Simulation**

PRÉSIDENT / CHAIR : Bel G. RAGGAD

School of Comp. Sc. and IS, Pace University, USA

RAGGAD, Bel G.  
School of Comp. Sc. and IS, Pace University, USA

Computational Freedom for Intelligent Decision Support

ABI-ZEID, Irène.  
Defence Research Establishment Valcartier (DREV), Canada

Sarplan: A Decision Support System for Optimal Planning of Search and Rescue Operations

L'ÉCUYER, Pierre  
Université de Montréal, Canada

Software for Uniform Random Number Generation: Part 1

L'ÉCUYER, Pierre  
Université de Montréal, Canada

Software for Uniform Random Number Generation: Part 2

**Session ME - A5 : MCDA Applications / Applications multicritères II**

PRESIDENT / CHAIR : Isabelle BEAUDOIN

Université de Sherbrooke, Canada

BEAUDOIN, Isabelle<sup>1</sup>, DUBEAU, François<sup>1</sup>, POMAR, Candido<sup>2</sup>  
(1) Université de Sherbrooke, Canada (2) Agriculture et agroalimentaire Canada

Formulation avec critères économique et environnemental d'une diète optimale pour porcs en croissance. Partie I : modèle statique multicritère

BEAUDOIN, Isabelle<sup>1</sup>, DUBEAU, François<sup>1</sup>, POMAR, Candido<sup>2</sup>  
(1) Université de Sherbrooke, (2) Agriculture et agroalimentaire Canada

Formulation avec critères économique et environnemental d'une diète optimale pour porcs en croissance. Partie II : modèle dynamique de contrôle optimal

BENCHAKROUN, Abdelhamid, KALLEL, Emna  
Université de Sherbrooke, Canada

Planification de la distribution de l'énergie électrique avec demande incertaine : modèles et algorithmes

**Session ME - A6 : Mathematical programming V**

PRÉSIDENT / CHAIR : Janos D. PINTER

Dalhousie University, Canada

LIN, Edward Yu-Hsien  
National Taipei University of Technology

The Past and Future in Non-Convex Programming With Special Ordered Sets of Variables

PINTER, Janos D.  
Dalhousie University, Canada

Global Optimization of Non-Uniform Sphere Packings

NAUDIN, Édith, MAUTOR, Thierry  
Université de Versailles, France

Another Dantzig-Wolfe Decomposition for the Vehicle Routing Problem With Capacity and Time Windows

ALARIE, Stéphane, AUDET, Charles, SAVARD, Gilles  
École Polytechnique de Montréal, Canada

Concavity Cuts for Disjoint Bilinear Programming

**Session ME - A7 : Transport II**

PRESIDENT / CHAIR : Michel GAMACHE

École Polytechnique de Montréal, Canada

ALARIE, Stéphane<sup>1</sup>, GAMACHE, Michel<sup>1,2</sup>  
(1) École Polytechnique de Montréal, (2) GERAD

Experimental Comparison Between Different Approaches for Truck Dispatching in Open-Pit Mines

GAMACHE, Michel<sup>1,2</sup>, GRIMARD, Renaud<sup>1</sup>, COHEN, Paul<sup>1</sup>, BIGRAS, Louis-Philippe<sup>1</sup>  
(1) École Polytechnique de Montréal, Canada (2) GERAD, Canada

A Shortest-Path Algorithm for Fleet Management in Underground Mines

GAMACHE, Michel<sup>1,2</sup>, ACHOUR, Heykel<sup>1,2</sup>, SOUMIS, François<sup>1,2</sup>  
(1) École Polytechnique de Montréal, (2) GERAD

Accelerating Strategies for the Solution of Sub-Problem Using Cuts



**Session ME – A8 : Network Models and Transportation**

PRESIDENT / CHAIR : Patrice MARCOTTE

Centre de recherche sur les transports, Canada

KIHEL<sup>1</sup>, Rachid, MARCOTTE<sup>2</sup>, Patrice, SAVARD<sup>1</sup>, Gilles  
(1) École Polytechnique, Canada (2) Centre de recherche sur les transports, Canada

A Descent Algorithm for a Multiclass Bilevel Problem

CÔTÉ<sup>1</sup>, Jean-Philippe, MARCOTTE<sup>2</sup>, Patrice, SAVARD<sup>3</sup>, Gilles  
(1) Université de Montréal, Canada (2) Centre de recherche sur les transports, Canada (3) École Polyt. de Montréal, Canada

A Bilevel Model of Yield Management in the Airline Industry

MARCOTTE<sup>1</sup>, Patrice, SAVARD<sup>2</sup>, Gilles, SEMET<sup>3</sup>, Frédéric  
(1) Centre de recherche sur les transports, Canada (2) École Polyt. de Montréal, Canada (3) Université de Valenciennes, France

A Bilevel Model for the TSP: Lower Bounds and Exact Results

HAMDOUCH<sup>1,3</sup>, Younes, NGUYEN<sup>2</sup>, Sang, MARCOTTE<sup>3</sup>, Patrice  
(1) DIRO (Université de Montréal), Canada (2) Université de Montréal, Canada (3) centre de recherche sur les transports, Canada

A Strategic Approach to Traffic Assignment: The Dynamic Case

12h00 Déjeuner / Lunch

12h00 Fin des travaux du congrès conjoint SCRO-JOPT 2001 / End of the CORS-OPTD 2001 Joint Conference