10th CMS'13

May 1 to 3, 2013

GERAD HEC MONTRÉAL

Conference Program

May 1, 2013

08:00 **Registration | Tata Communications**

08:45 **Welcome Address | IBM**

WAP Plenary 1

Room: IBM
Chair: Delage, Erick, GERAD, HEC Montréal

09:00 **Recent Progresses on Linear Programming and the Simplex Method**

Ye, Yinyu, Standford University, yinyu-ye@stanford.edu

10:00 **Coffee Break | Investissement Québec**

WA1 Vehicle Routing I

Room: Mary Husny
Chair: Cordeau, Jean-François, GERAD, HEC Montréal

10:30 **The Vehicle Routing Problem with Hard Time Windows and Stochastic Service Times**

Errico, Fausto, Polytechnique Montréal, fausto.errico@cirrelt.ca
Desaulniers, Guy, GERAD, Polytechnique Montréal, Guy.Desaulniers@gerad.ca
Gendreau, Michel, Polytechnique Montréal, Michel.Gendreau@cirrelt.ca
Rei, Walter, Université du Québec à Montréal, walter.rei@cirrelt.ca
Rousseau, Louis-Martin, Polytechnique Montréal, louis-martin.rousseau@polymtl.ca

11:00 **A Branch-Cut-and-Price Algorithm for the Vehicle Routing Problem with Stochastic Demands**

Gauvin, Charles, GERAD, Polytechnique Montréal, charles.gauvin@polymtl.ca

11:30 **A Branch-and-Price Approach for a Stochastic Vehicle Routing Problem with Correlated Demands**

Dayarian, Iman, Université de Montréal, iman.dayarian@cirrelt.ca
Crainic, Teodor Gabriel, Université du Québec à Montréal, TeodorGabriel.Crainic@cirrelt.ca
Gendreau, Michel, Polytechnique Montréal, Michel.Gendreau@cirrelt.ca
Rei, Walter, Université du Québec à Montréal, walter.rei@cirrelt.ca

12:00 **Benders Decomposition for Production Routing under Demand Uncertainty**

Adulyasak, Yossiri, HEC Montréal, yossiri.adulyasak@hec.ca
Cordeau, Jean-François, GERAD, HEC Montréal, jean-francois.cordeau@hec.ca
Jans, Raf, GERAD, HEC Montréal, raf.jans@hec.ca

WA2 Smart Grids

Room: St-Hubert
Chair: Anjos, Miguel, GERAD, Polytechnique Montréal

10:30 **Strategies for the Fast Identification of Umbrella Constraints in Security-Constrained Optimal Power Flow Problems**

Ardakani Jahanbani, Ali, McGill University, ali.ardakanijahanbani@mail.mcgill.ca
Bouffard, François, McGill University, francois.bouffard@mcgill.ca

11:00 **Demand Side Load Management in the Smart Grid: a Smart Consumer Perspective**

Zhu, Guchuan, Polytechnique Montréal, guchuan.zhu@polymtl.ca
Anjos, Miguel, GERAD, Polytechnique Montréal, miguel-f.anjos@polymtl.ca
Savard, Gilles, GERAD, Polytechnique Montréal, gilles.savard@polymtl.ca
Costanzo, Giuseppe T., Technical University of Denmark, guco@elektro.dtu.dk

11:30 **Value of Large-Scale Energy Storage in Québec**

Xu, Xiaoxi, Polytechnique Montréal, xiaoxi.xu@polymtl.ca
Anjos, Miguel, GERAD, Polytechnique Montréal, miguel-f.anjos@polymtl.ca
Savard, Gilles, GERAD, Polytechnique Montréal, gilles.savard@polymtl.ca

12:00 **Optimization of Wind, Diesel and Battery Systems for Remote Areas**

Barbier, Thibault, Polytechnique Montréal, thibault.barbier@polymtl.ca
Anjos, Miguel, GERAD, Polytechnique Montréal, miguel-f.anjos@polymtl.ca
Savard, Gilles, GERAD, Polytechnique Montréal, gilles.savard@polymtl.ca

WA3 Dynamic Games and Applications I

Room: CPA du Québec
Chair: Nagurney, Anna, Isenberg School of Management

10:30 **A New Service Adoption Model with Customer Acquisition and Retention Expenditures**

Ben Rhouma, Tarek, GERAD, HEC-Montréal, tarek.ben.rhouma@gerad.ca
Zaccour, Georges, GERAD, HEC Montréal, georges.zaccour@gerad.ca

11:00 **Pricing Strategies of Complementary Products in Distribution Channels: A Dynamic Approach**

Taboubi, Sihem, GERAD, HEC Montréal, sihem.taboubi@hec.ca
Ngendakuriyo, Fabien, GERAD, Fabien.Ngendakuriyo@gerad.ca

11:30 **Operations and Marketing Equilibrium Strategies under Wholesale Price and Revenue Sharing Contracts in a Dynamic Vertical Channel**

El Ouardighi, Fouad, ESSEC Business School, elouardighi@essec.fr
Erickson, Gary, University of Washington, erick@u.washington.edu
Grass, Dieter, Vienna Technical University, dieter.grass@tuwien.ac.at
Jorgensen, Steffen, Odense University, steffenjorgensen2510@gmail.com

12:00 **A Cournot-Nash-Bertrand Game Theory Model of a Service-Oriented Internet with Price and Quality Competition Among Network Transport Providers**

Nagurney, Anna, Isenberg School of Management, nagurney@isenberg.umass.edu
Wolf, Tilman, University of Massachusetts, wolf@ecs.umass.edu

WA4 Investment and Operational Decision Making in Energy Markets

Room: Serge-Saucier
Chair: Siddiqui, Afzal, University College London

10:30 **Assessing Electricity Market Integration: A Detailed Empirical Model of Trade Between a Thermal and a Hydro System**

Pineau, Pierre-Olivier, HEC Montréal, pierre-olivier.pineau@hec.ca
Billette de Villemeur, Etienne, Université de Lille (EQUIPPE), Etienne.de-Villemeur@univ-lille1.fr

11:00 **A Solver Manager for Energy Systems Planning within a Stochastic Optimization Framework**

Cano, Emilio L., Universidad Rey Juan Carlos, emilio.lopez@urjc.es
Alonso-Ayuso, Antonio, Universidad Rey Juan Carlos, antonio.alonso@urjc.es
Moguerza, Javier M., Universidad Rey Juan Carlos, javier.moguerza@urjc.es
Ortega, Felipe, Universidad Rey Juan Carlos, felipe.ortega@urjc.es

11:30 **Approximating Closed Loop Equilibria via Open Loop Equilibrium Models: An Application to Generation Expansion Planning in Liberalized Electricity Markets**

Wogrin, Sonja, Comillas Pontifical University, sonja.wogrin@iit.upcomillas.es
Centeno, Efraim, Comillas Pontifical University, Efraim.Centeno@upcomillas.es

12:00 **Transmission and Wind Investment in a Deregulated Electricity Industry**

Maurovich-Horvat, Lajos, University College London, l.horvat@ucl.ac.uk
Boomsma, Trine, University of Copenhagen, trine@math.ku.dk
Fleten, Stein-Erik, Norwegian University of Science and Technology, stein-erik.fleten@iot.ntnu.no
Siddiqui, Afzal, University College London, Afzal.siddiqui@ucl.ac.uk

12:30 **Lunch | L'Oréal**

WB1 Tutorial 1

Room: Mary Husny
Chair: Zaccour, Georges, GERAD, HEC Montréal

14:00 **Pricing on Networks: A Bit of Theory and Some Applications**

Marcotte, Patrice, Université de Montréal, marcotte@iro.umontreal.ca

WB2 Robust Optimization I

Room: St-Hubert
Chair: Delage, Erick, GERAD, HEC Montréal

14:00 **Pareto Efficiency in Robust Optimization**

Trichakis, Nikos, HBS, ntrichakis@hbs.edu
Iancu, Dan, Stanford GSB, daniancu@stanford.edu

14:30 **Static vs Adjustable Solutions in Dynamic Optimization**

Bertsimas, Dimitris, Massachusetts Institute of Technology, dbertsim@mit.edu
Goyal, Vineet, Columbia University, vgoyal@ieor.columbia.edu
Lu, Brian Yin, Columbia University, yl2662@columbia.edu

15:00 **Robust Optimization of a Class of Bi-Convex Functions**

Delage, Erick, GERAD, HEC Montréal, erick.delage@hec.ca
Ardestani-Jaafari, Amir, GERAD, HEC Montreal, amir.ardestani-jaafari@hec.ca

WB3 Portfolio Management and Insurance Models

Room: CPA du Québec
Chair: Marin-Solano, Jesus, Universitat de Barcelona

14:00 **On the Ruin Problem: New Directions and Applications**

Morales, Manuel, Université de Montréal, morales@dms.umontreal.ca

14:30 **Comonotonic Approximations for Sums of Dependent Log-Skew Normal Random Variables**

Roch, Oriol, Universitat de Barcelona, oroch@ub.edu

15:00 **Credit Risk: An Actuarial Approach Based on Risk Measures**

Garrido, Jose, Concordia University, jose.garrido@concordia.ca
Balbás, Alejandro, University Carlos III of Madrid, alejandro.balbas@uc3m.es
Okhrati, Ramin, University of Southampton, raminokhrati@yahoo.com

WB4 Energy Market Models I

Room: Serge-Saucier
Chair: Fuller, David, University of Waterloo

14:00 **A Decomposition Method for Solving Equilibrium Programs with Equilibrium Constraints**

Siddiqui, Sauleh, Johns Hopkins University, siddiqui@jhu.edu

14:30 **Recent Results in Global Gas Market Modeling**

Gabriel, Steven A., University of Maryland, sgabriel@umd.edu
Moryadee, Seksun, University of Maryland, smoryade@umd.edu
Avetisyan, Hakob, University of Maryland, havetisy@umd.edu

15:00 **Optimal Transmission Switching: Evidence of Inaccuracy of Linear Models**

Fuller, David, University of Waterloo, dfuller@uwaterloo.ca
Soroush, Milad, University of Waterloo, milad.soroush1@gmail.com

15:30 **Coffee Break | Investissement Québec**

WC1 Financial Modeling and Analysis I

Room: Mary Husny
Chair: Davison, Matt, University of Western Ontario

16:00 **A Dynamic Programming Approach Using Tchebychev Interpolation for Pricing Bonds with Embedded Options under a Two Factor Gaussian Model**

Siliadin, Yaovi Gassesse, HEC Montreal, yaovi-gassesse.siliadin@hec.ca
Breton, Michèle, GERAD, HEC Montréal, michele.breton@hec.ca

16:30 **American Options in a Jump-Diffusion Framework: Estimation and Evaluation**

Cherif, Rim, GERAD, HEC Montréal, RIM.CHERIF@hec.ca
Ben Ameur, Hatem, GERAD, HEC Montréal, hatem.ben-ameur@hec.ca
Rémillard, Bruno, GERAD, HEC Montréal, bruno.remillard@hec.ca

17:00 **EU ETS Futures Spread Analysis and Pricing Contingent Claims Under Different Market Schemes**

Davison, Matt, The University of Western Ontario, mdavison@uwo.ca
Mnif, Walid, University of Western Ontario, wmnif@uwo.ca

WC2 Robust Optimization II

Room: St-Hubert
Chair: Gupta, Vishal, Massachusetts Institute of Technology

16:00 **On the Power of Randomization in Robust Optimization and Network Interdiction**

Nasrabadi, Ebrahim, Massachusetts Institute of Technology, nasrabad@mit.edu
Bertsimas, Dimitris, Massachusetts Institute of Technology, dbertsim@mit.edu
Orlin, James, Massachusetts Institute of Technology, jorlin@mit.edu

16:30 **Big Data and Robust Optimization**

Gupta, Vishal, Massachusetts Institute of Technology, vgupta1@mit.edu

17:00 **Robust Maximum Likelihood Estimators**

Nohadani, Omid, Purdue University, nohadani@purdue.edu
Bertsimas, Dimitris, Massachusetts Institute of Technology, dbertsim@mit.edu
Fertis, Apostolos, ETH Zurich, apostolos.fertis@ifor.math.ethz.ch

WC3 Dynamic Games and Applications II

Room: CPA du Québec
Chair: Rönnqvist, Mikael, Université Laval

16:00 **An Empirical Differential Game for Sustainable Forest Management**

Andrés-Domenech, Pablo, AgroParisTech, GERAD, pablo.andres-domenech@agroparistech.fr
Martín-Herrán, Guiomar, GERAD, Universidad de Valladolid, guiomar@eco.uva.es
Zaccour, Georges, GERAD, HEC Montréal, georges.zaccour@hec.ca

16:30 **Open Access to the Resource of Antibiotic Treatment Efficacy Subject to Bacterial Resistance**

Nkuiya, Bruno, Université Laval and CREATE, robeny-bruno.nkuiya-mbakop.1@ulaval.ca
Herrmann, Markus, Université Laval and CREATE, markus.herrmann@ecn.ulaval.ca

17:00 **An Online Game for Collaborative Logistics**

Rönnqvist, Mikael, Université Laval, mikael.ronnqvist@gmc.ulaval.ca
D'Amours, Sophie, Université Laval, sophie.damours@forac.ulaval.ca
Marier, Philippe, Université Laval, Philippe.Marier@forac.ulaval.ca

WC4 Energy Risk: Empirical Applications

Room: Serge-Saucier
Chair: Fleten, Stein-Erik, Norwegian University of Science and Technology

16:00 **Nord Pool Day-Ahead Power Prices: Forecasting Switches between Volatility Regimes based on Fundamental Information**

Huisman, Ronald, Erasmus School of Economic, rhuisman@ese.eur.nl
Westgaard, Sjur, Norwegian University of Science and Technology, sjur.westgaard@iot.ntnu.no

16:30 **Demand-at-Risk Forecasting in Case of Seasonality, Extremes and Volatility Clustering**

Hagspiel, Verena, University of Lausanne, v.hagspiel@uvt.nl

17:00 **Switching Options in Peak Power Plants: Empirical Evidence**

Fleten, Stein-Erik, Norwegian University of Science and Technology, stein-erik.fleten@iot.ntnu.no
Pichler, Alois, Norwegian University of Science and Technology, alois.pichler@iot.ntnu.no
Ullrich, Carl, Virginia Tech, cullr@vt.edu

18:00 **Wine & Cheese Party | L'Oréal**

May 2, 2013

TAP Plenary 2

Room: Banque de développement du Canada
Chair: Zaccour, Georges, GERAD, HEC Montréal

09:00 **Game Theory Explorer - Software for the Applied Game Theorist**

von Stengel, Bernhard, London School of Economics and Political Science, stengel@nash.lse.ac.uk

10:00 **Coffee Break | Investissement Québec**

TA1 Vehicle Routing II

Room: Mary Husny
Chair: Fagerholt, Kjetil, Norwegian University of Science and Technology

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10:30 **The Departure Time and Speed Optimization Problem**

Franceschetti, Anna, Eindhoven University of Technology, a.franceschetti@tue.nl
Honhon, Dorothèe, Eindhoven University of Technology, D.B.L.P.Honhon@tue.nl
Van Woensel, Tom, Eindhoven University of Technology, t.v.woensel@tue.nl
Bektas, Tolga, University of Southampton, T.Bektas@soton.ac.uk
Laporte, Gilbert, CIRRELT, GERAD, HEC Montréal, gilbert.laporte@cirrelt.ca

11:00 **An Elementary Shortest Path Problem with Variable Service Start Times**

Küçükaydin, Hande, University of Liège, HEC Management School, hkucukaydin@ulg.ac.be
Arda, Yasemin, University of Liège, HEC Management School, yasemin.arda@ulg.ac.be
Crama, Yves, University of Liège, HEC Management School, Yves.Crama@ulg.ac.be

11:30 **A Time-Constrained Shortest Path Problem with Stochastic Costs**

Prillard, Martin, Université de Technologie de Troyes,
Duhamel, Christophe, LIMOS, Université Clermont-Ferrand II, christophe.duhamel@isima.fr
Santos, Andréa, ICD-LOSI, UTT, Troyes, andrea.duhamel@utt.fr
Vidal, Thibaut, CIRRELT, Université de Montréal & ICD-LOSI, Université de Technologie de Troyes, thibaut.vidal@cirrelt.ca

12:00 **Maritime Fleet Deployment with Speed Optimization**

Fagerholt, Kjetil, Norwegian University of Science and Technology, kjetil.fagerholt@iot.ntnu.no
Andersson, Henrik, Norwegian University of Science and Technology, Henrik.Andersson@iot.ntnu.no
Hobbesland, Kirsti, Norwegian University of Science and Technology

TA2 Stochastic Models in Power Generation I

Room: St-Hubert
Chair: Gendreau, Michel, Polytechnique Montréal

10:30 **SMART-ISO – Stochastic Optimization for Nested Energy Markets**

Powell, Warren, Princeton University, powell@princeton.edu
Simao, Hugo, Princeton University, hpsimao@princeton.edu
Defourny, Boris, Princeton University, defourny@princeton.edu

11:00 **Comparison Between Different Hydrologic State Variables in Stochastic Dynamic Programming Applies to Hydropower Production**

Côté, Pascal, Rio Tinto Alcan, pascal.cote@riotinto.com
Desreumaux, Quentin, Université de Sherbrooke, desreumauxq@gmail.com
Latraverse, Marco, Rio Tinto Alcan, marco.latraverse@riotinto.com

11:30 **A Stochastic Model for Power Generation RD&D and Capital Investment Planning Under Decision-Dependent Uncertainty**

Santen, Nidhi R., Harvard University Belfer Center for Science and International Affairs, nidhi_santen@hks.harvard.edu
Diaz Anadon, Laura, Harvard University Belfer Center for Science and International Affairs, laura_diaz_anadon@harvard.edu

12:00 **Objective-Based Generation of Scenario Trees**

Munger, David, CIRRELT, Polytechnique Montréal, David.Munger@cirrelt.ca
Gendreau, Michel, Polytechnique Montréal, Michel.Gendreau@cirrelt.ca
Saucier, Antoine, Polytechnique Montréal, antoine.saucier@polymtl.ca

TA3 Dynamic Games and Applications III

Room: CPA du Québec
Chair: François, Pascal, HEC Montreal

10:30 **The Return Function: A new Tool to Compute Bayesian-Nash Equilibria**

Hoang, Lê Nguyên, GERAD, Polytechnique Montréal, le.nguyen.hoang@gerad.ca
Soumis, François , GERAD, Polytechnique Montréal, francois.soumis@gerad.ca
Zaccour, Georges, GERAD, HEC Montréal, georges.zaccour@gerad.ca

11:00 **The Evolution of Cooperation with Action-Varying Functions for Strategy Copying Using Cellular Automata**

Schimit, Pedro Henrique Triguis, Universidade Nove de Julho, schimit@uninove.br
Santos, Buruthagas, Universidade Nove de Julho, buruthagas@hotmail.com
Soares, Carlson, Universidade Nove de Julho, soares_289@hotmail.com

11:30 **Coalition Strategies in Syndicated Loans**

François, Pascal, HEC Montréal, pascal.francois@hec.ca
Breton, Michèle, GERAD, HEC Montréal, michele.breton@hec.ca

12:00 **Evolutionary Games and Local Dynamics**

Uyttendaele, Philippe, Maastricht University, philippe.uyttendaele@maastrichtuniversity.nl
Thuijsman, Frank, Maastricht University, f.thuijsman@maastrichtuniversity.nl

TA4 Statistical Computing

Room: Serge-Saucier
Chair: Plante, Jean-Francois, GERAD, HEC Montréal

10:30 **Using BIRCH to Compute Approximate Rank Statistics on Massive Datasets**

Charest, Lysiane, HEC Montréal, lysiane.charest@hec.ca
Plante, Jean-François, GERAD, HEC Montréal, jfplante@hec.ca

11:00 **Learning from Massive Data, A Bayesian Approach**

Partovi Nia, Vahid, GERAD, Polytechnique Montréal, vahid.partovinia@polymtl.ca

11:30 **A Comparison of Maximum Likelihood and Markov Chain Monte Carlo Approaches in Fitting Hierarchical Longitudinal and Cross-Sectional Binary Data: A Simulation Study**

Fotouhi, Ali, University of Fraser Valley, Ali.Fotouhi@ufv.ca

12:00 **Mixed Effects Trees and Random Forests**

Hajjem, Ahlem, UQAM ESG, hajjem.ahlem@uqam.ca

12:30 **Lunch | L'Oréal**

TB1 Tutorial 2

Room: Banque de développement du Canada
Chair: Delage, Erick, GERAD, HEC Montréal

14:00 **Outlier-Robust Estimation for High Dimensional Statistics**

Caraminis, Constantine, University of Texas, cmcaram@ece.utexas.edu

TB2 Dynamic Games and Applications IV

Room: Mary Husny
Chair: de Frutos, Javier, GERAD, Universidad de Valladolid

14:00 **S-adapted Equilibria in Games Played Over Event Trees with Coupled Constraint**

Kanani Kuchesfehani, Elnaz, GERAD, HEC Montréal, Elnaz.Kanani@gerad.ca

14:30 **Fighting Corruption: To Precommit or Not?**

Ngendakuriyo, Fabien, GERAD, Fabien.Ngendakuriyo@gerad.ca
Zaccour, Georges, GERAD, HEC Montréal, georges.zaccour@gerad.ca

15:00 **Non-Linear Strategies in Differential Games: A Numerical Investigation**

de Frutos, Javier, GERAD, Universidad de Valladolid, frutos@mac.uva.es
Martín-Herrán, Guiomar, GERAD, Universidad de Valladolid, guiomar@eco.uva.es

TB3 Multistage Stochastic Programming

Room: St-Hubert
Chair: Pflug, Georg, University of Vienna

14:00 **Risk-Averse Stochastic Dual Dynamic Programming**

Kozmik, Vaclav, Charles University in Prague, vkozmik@gmail.com
Morton, David P., The University of Texas at Austin, morton@mail.utexas.edu

14:30 **Approximations for Multistage Stochastic Optimization Programs**

Pflug, Georg, University of Vienna, georg.pflug@univie.ac.at

15:00 **On the Distance Between Stochastic Processes in Multi-Stage Stochastic Optimization Programs**

Timonina, Anna, University of Vienna, timonina.ann@gmail.com

TB4 Financial Modeling and Analysis II

Room: Serge-Saucier
Chair: Kinnunen, Jani, IAMSR, Åbo Akademi University

14:00 **Robust Portfolio Optimization with Copulas, Creating a Portfolio Strategy for Periods of Crisis**

Kakouris, Iakovos, Imperial College London, iak05@ic.ac.uk
Rustem, Berç, Imperial College London, br@doc.ic.ac.uk

14:30 **Optimal Stopping for Portfolio Management**

Spachis, Alexandra, Imperial College, alexandra.spachis04@imperial.ac.uk
Hadjiconstantinou, Eleni, Imperial College, e.hconstantinou@imperial.ac.uk

15:00 **Venture Capitalist Portfolio Selection under Probabilistic and Possibilistic Risk**

Kinnunen, Jani, IAMSR, Åbo Akademi University, jpkinnunen@gmail.com

15:30 **Coffee Break | Investissement Québec**

TC1 Tutorial 3

Room: Banque de développement du Canada
Chair: Plante, Jean-François, GERAD, HEC Montréal

16:00 **Statistical Learning: An Introductory Overview**

Zhu, Mu, University of Waterloo, m3zhu@uwaterloo.ca

TC2 Vehicle Routing III

Room: Mary Husny
Chair: C. Coelho, Leandro, CIRRELT, HEC Montréal

16:00 **Branch-Cut-and-Price for the Pickup and Delivery Problem with Time Windows and LIFO Loading**

Cherkesly, Marilène, GERAD, Polytechnique Montréal, marilene.cherkesly@gerad.ca
Laporte, Gilbert, CIRRELT, GERAD, HEC Montréal, gilbert.laporte@cirrelt.ca
Desaulniers, Guy, GERAD, Polytechnique Montréal, Guy.Desaulniers@gerad.ca

16:30 **The Quadratic Capacitated Vehicle Routing Problem**

Contardo, Claudio, ESG UQÀM, claudio.contardo@gerad.ca
Martinelli, Rafael, GERAD, Polytechnique Montréal, rafael.martinelli@gerad.ca

17:00 **Optimized Target Level - A New Policy for Vendor-Managed Inventory Systems**

Coelho, Leandro C., CIRRELT, HEC Montréal, leandro.coelho@cirrelt.ca
Laporte, Gilbert, CIRRELT, GERAD, HEC Montréal, gilbert.laporte@cirrelt.ca

TC3 Stochastic Models in Power Generation II

Room: St-Hubert
Chair: Gendreau, Michel, Polytechnique Montréal

16:00 **A L-Saped Method for Mid-Term Hydro Scheduling Under Uncertainty**

Carpentier, Pierre-Luc, Polytechnique Montréal, pierre-luc.carpentier@polymtl.ca
Gendreau, Michel, Polytechnique Montréal, Michel.Gendreau@cirrelt.ca
Bastin, Fabian, Université de Montréal, bastin@iro.umontreal.ca

16:30 **Stochastic Model for Small Hydro Units Energy Commercialization in the Brazilian Energy Market**

de Matos, Vitor, Plan4 Engenharia, vitor@plan4.com.br
Gonzalez, Mauro, Plan4/UFSC, maurogzsa@gmail.com
Finardi, Erlon, UFSC, erlon.finardi@ufsc.br
Milanezi, Andre, CELESC, andreasm@celesc.com.br
Decker, Brigida, Plan4/UFSC, brigida.decker@gmail.com
Alfing, Eduarda, Plan4, eduarda.alfing@hotmail.com

17:00 **Decision-Support in the Hydro Energy Market: A Stochastic Approach with Risk Aversion Measures**

Gendreau, Michel, Polytechnique Montréal, Michel.Gendreau@cirrelt.ca
Gonçalves, Raphael E.C., Polytechnique Montréal, raphael.ecg@gmail.com

TC4 Financial Modeling and Analysis III

Room: Serge-Saucier
Chair: Ben Ameur, Hatem, GERAD, HEC Montréal

16:00 **Using a Bayesian Model for Bankruptcy Prediction: A Comparative Approach**

Trabelsi, Samir, Brock University, strabelsi@brocku.ca
He, Larence, Brock University, lhe@brocku.ca
He, Ron, Brock University, zhanpengho@hotmail.com

16:30 **Investigating the Market Price of Volatility Risk for Options in a Regime-Switching Market**

Mielkie, Melissa, The University of Western Ontario, mmielkie@uwo.ca
Davison, Matt, The University of Western Ontario, mdavison@uwo.ca

17:00 **A Dynamic Program for Valuing Corporate Securities**

Ben Ameur, Hatem, HEC Montréal and GERAD, hatem.ben-ameur@hec.ca
Ayadi, Mohamed, Brock University, mayadi@brocku.ca
Fakhfakh, Tarek, Université de Sfax, tarakfakhfakh@gmail.com

May 3, 2013

FAP Plenary 3

Room: Banque de développement du Canada
Chair: Rustem, Berc, *Imperial College London*

09:00 **Recursive Methods for Pricing Financial Derivatives**

Breton, Michèle, GERAD, HEC Montréal, michele.breton@hec.ca

10:00 **Coffee Break | Investissement Québec**

FA1 Vehicle Routing IV

Room: Mary Husny
Chair: Maknoon, Mohammad Yousef, *GERAD*

10:30 **Heuristics for Blood Distribution: Case Study in Thailand**

Chaiwuttisak, Pornpimol, University of Southampton, pc12g09@soton.ac.uk
Smith, Honora, Mathematics and Management, University of Southampton, Honora.Smith@soton.ac.uk
Wu, Yue, Management, University of Southampton, Y.Wu@soton.ac.uk

11:00 **Vehicle Scheduling with Respect to Vehicle-Specific Tasks**

Bekesi, Jozsef, University of Szeged, bekesi@jgypk.u-szeged.hu
David, Balazs, University of Szeged, davidb@inf.u-szeged.hu
Kresz, Miklos, University of Szeged, kresz@jgypk.u-szeged.hu

11:30 **A Metaheuristic for the Multi-zone Multi-trip Vehicle Routing Problem with Time Windows**

Nguyen Khanh, Phuong, Université de Montréal, phuong@crt.umontreal.ca
Crainic, Teodor Gabriel, Université du Québec à Montréal, TeodorGabriel.Crainic@cirrelt.ca
Toulouse, Michel, Oklahoma State University, michel.toulouse@okstate.edu

12:00 **Pickup and Delivery Problem with the Choice of Multiple Cross-Docks**

Maknoon, Mohammad Yousef, Polytechnique Montréal, mohammad-yousef.maknoon@polymtl.ca
Laporte, Gilbert, CIRRELT, GERAD, HEC Montréal, gilbert.laporte@cirrelt.ca

FA2 Energy Market Models II

Room: St-Hubert
Chair: Maxwell, Christian, *University of Western Ontario*

10:30 **Optimal Pricing of Retail Gasoline**

Kim, Daero, The University of Western Ontario, dkim47@uwo.ca
Davison, Matt, The University of Western Ontario, mdavison@uwo.ca
Odegaard, Fredrik, The University of Western Ontario, fodegaard@ivey.uwo.ca

11:00 **Investigation of Energy Consumption Indicator of Buildings by Clustering and ANOVA Analysis**

Lee, Wen-Shing, National Taipei University of Technology, f10911@ntut.edu.tw
Lin, Lung-Chieh, National Taipei University of Technology, lungjay@yahoo.com.tw

11:30 **Risk Hedging Optimal Capacity in the European Hub-Based Natural Gas Market Network: A Model-Based Approach**

Darvish, Parviz, ESSEC Business School, parviz.darvish@essec.edu

12:00 **Using Real Option Analysis to Quantify Ethanol Policy Impact on the Firm's Entry Into and Optimal Operation of Corn Ethanol Facilities**

Maxwell, Christian, University of Western Ontario, cmaxwel5@uwo.ca

FA3 Dynamic Games and Applications V

Room: CPA du Québec
Chair: Haurie, Alain, Université de Genève

10:30 **Evolutionary Farsightedness in International Environmental Agreements**

Garrab, Samar, HEC Montréal, samar.garrab@hec.ca
Breton, Michèle, GERAD, HEC Montréal, michele.breton@hec.ca

11:00 **Linear Quadratic Games Defined on Event Trees**

Reddy, Puduru Viswanadha, GERAD, Puduru.Reddy@gerad.ca
Zaccour, Georges, GERAD, HEC Montréal, georges.zaccour@gerad.ca

11:30 **A Dynamic Game of International Pollution under Uncertainty and Learning**

Masoudi, Nahid, GERAD, HEC Montréal, nahid.masoudi@hec.ca

12:00 **A Robust Game Formulation of Burden Sharing in an International Climate Agreement**

Haurie, Alain, GERAD, ORDECSYS, ahaurie@gmail.com
Babonneau, Frédéric, ORDECSYS, fbabonneau@ordecsys.com
Vial, Jean-Philippe, ORDECSYS, jpvial@ordecsys.com
Vielle, Marc, École Polytechnique Fédérale de Lausanne, marc.vielle@epfl.ch

FA4 Revenue Management

Room: Serge-Saucier
Chair: Bastin, Fabian, Université de Montréal

10:30 **Network Capacity Control under a Non-Parametric Choice Model of Demand**

Hosseinalifam, Morad, Polytechnique Montréal, morad.hosseinalifam@polymtl.ca
Marcotte, Patrice, Université de Montréal, marcotte@iro.umontreal.ca
Savard, Gilles, GERAD, Polytechnique Montréal, gilles.savard@polymtl.ca

11:00 **Demand Modeling in Revenue Management Systems under Availability Constraints**

Sharif Azadeh, Shadi, Polytechnique Montréal, shadi.sharifazadeh@polymtl.ca
Savard, Gilles, GERAD, Polytechnique Montréal, gilles.savard@polymtl.ca

11:30 **Accommodating Taste Heterogeneity in the Railway Pricing and Seat Allocation Problem**

Cirillo, Cinzia, University of Maryland, ccirillo@umd.edu
Hetrakul, Pratt, University of Maryland, hetrakul@umd.edu

12:00 **Dynamic Discrete Choice Model for Railway Ticket Cancellation and Exchange Behavior**

Bastin, Fabian, Université de Montréal, bastin@iro.umontreal.ca
Hetrakul, Pratt, University of Maryland, hetrakul@umd.edu
Cirillo, Cinzia, University of Maryland, ccirillo@umd.edu

12:30 **Lunch | L'Oréal**

FB1 Tutorial 4

Room: Banque de développement du Canada
Chair: Siddiqui, Afzal, University College London

14:00 **Complementarity Modeling in Energy Markets**

Fuller, David, University of Waterloo, dfuller@uwaterloo.ca

FB2 Combinatorial Optimization

Room: Mary Husny
Chair: Perron, Sylvain, GERAD, HEC Montréal

14:00 **Bi-Objective Variable Neighborhood Search for the p-Diversity-Proximity Problem**

Saboonchi, Behnaz, GERAD, HEC Montréal, behnaz.saboonchi@gerad.ca
Hansen, Pierre, GERAD, HEC Montréal, pierre.hansen@gerad.ca
Perron, Sylvain, GERAD, HEC Montreal, sylvain.perron@hec.ca

14:30 **Routing and Wavelength Assignment Problem with Geodesics in Realistic Optical Transport Network Topologies**

Cousineau, Martin, McGill University, martin.cousineau@mail.mcgill.ca
Perron, Sylvain, GERAD, HEC Montreal, sylvain.perron@hec.ca
Caporossi, Gilles, GERAD, HEC Montréal, gilles.caporossi@gerad.ca
Paiva, Marcia, Federal University of Espirito Santo, marcia.paiva@ufes.br
Segatto, Marcelo, Federal University of Espirito Santo, segatto@ele.ufes.br

15:00 **The Maximum Ratio Clique Problem**

Sethuraman, Samyukta, Texas A&M University, samyukta@tamu.edu
Butenko, Sergiy, Texas A&M University, butenko@tamu.edu

FB3 Operations Management

Room: St-Hubert
Chair: Pakkar, Mohammad Sadegh, Laurentian University

14:00 **Imperfect Production with Learning and Forgetting Effects**

Sadeghigivi, Zahra, Ryerson University, zahra.sadeghi@ryerson.ca

14:30 **An Integrated Approach Based on DEA and AHP: A Case Study for Financial Performance Assessment**

Pakkar, Mohammad Sadegh, Laurentian University, ms_pakkar@laurentian.ca

15:00 **Minimizing Maintenance Cost under Reliability Constraints**

Poggi, Marcus, Pontifícia Universidade Católica do Rio de Janeiro, poggi@inf.puc-rio.br
Flach, Bruno, IBM Research, bflach@br.ibm.com
Silva, Thuener, PUC-Rio, tsilva@inf.puc-rio.br

FB4 Financial Modeling and Analysis IV

Room: Serge-Saucier
Chair: Boudhina, Ali, HEC Montréal

14:00 **Risk Analysis of the Smith Manoeuvre for Re-advanceable Canadian Mortgages**

Naseem, Almas, University of Western Ontario, anaseem2@uwo.ca
Reesor, Mark, University of Western Ontario, mreesor@uwo.ca

14:30 **Measuring the Globalization Influence on the Stock Market Using Network Approach**

Kalyagin, Valery, National Research University Higher School of Economics, vkalyagin@hse.ru
Vizgunov, Arsenii, National Research University Higher School of Economics, anvizgunov@hse.ru
Pardalos, Panos, University of Florida, p.m.pardalos@gmail.com

15:00 **Ageneral Framework to Price Segregated Funds Guarantees**

Boudhina, Ali, HEC Montréal, ali.boudhina@hec.ca
Breton, Michèle, GERAD, HEC Montréal, michele.breton@hec.ca

15:30 **Coffee Break | Investissement Québec**

FC1 Transportation

Room: Mary Husny
Chair: Telhada, João, Operations Research Center, University of Lisbon

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16:00 **Optimization and Analysis of Railway Timetables**

Barrena Algara, Eva, CIRRELT, HEC Montréal, ebarrena@us.es
Canca Ortiz, David, Universidad de Sevilla, dco@us.es
Coelho, Leandro C., CIRRELT, HEC Montréal, leandro.coelho@cirrelt.ca
Laporte, Gilbert, CIRRELT, GERAD, HEC Montréal, gilbert.laporte@cirrelt.ca
Zarzo Altarejos, Alejandro, Universidad Politécnica de Madrid, azarzo@etsii.upm.es

16:30 **Efficient Ways of Designing Optimal Vertical Alignment of Roads**

Hossain, Shahadat, UBC, shahadat.hossain@ubc.ca

17:00 **Metaheuristic for the Integrated Approach to the Freight Train Routing and Block-to-Train Assignment**

Telhada, João, Operations Research Center, University of Lisbon, joao.telhada@fc.ul.pt
Moniz, Martim, Université Libre de Bruxelles
Silva, Diogo, University of Lisbon

FC2 Stochastic Programming

Room: St-Hubert
Chair: Parpas, Panos, Imperial College London

16:00 **Robust Markov Decision Processes**

Wiesemann, Wolfram, Imperial College London, ww@imperial.ac.uk

16:30 **Optimal control of Weakly Connected Markov Decision Processes**

Parpas, Panos, Imperial College London, p.parpas@imperial.ac.uk

17:00 **General Linear Formulations of Stochastic Dominance Criteria**

Kopa, Milos, Charles University in Prague, MFF, kopa@karlin.mff.cuni.cz
Post, Thierry, Koc University, thierrypost@hotmail.com

FC3 Dynamic Games and Applications VI

Room: CPA du Québec
Chair: Kuhn, Daniel, Imperial College London

16:00 **A Supply Chain Network Game Theoretic Framework for Time-Based Competition with Transportation Costs and Product Differentiation**

Nagurney, Anna, Isenberg School of Management, nagurney@isenberg.umass.edu
Yu, Min, University of Portland, yu@up.edu

16:30 **Interdiction Games on Markovian PERT Networks**

Kuhn, Daniel, Imperial College London, dkuhn@imperial.ac.uk

17:00 **Competitors Are Welcome: Why Incumbents Might Embrace Entrants?**

Bako, Barna, Corvinus University of Budapest, barna.bako@uni-corvinus.hu

FC4 Financial Modeling and Analysis V

Room: Serge-Saucier
Chair: Ma, Alfred Ka Chun, Chinese University of Hong Kong

16:00 **Time-Consistent Equilibria in a Portfolio and Life Insurance Model With Time-Inconsistent Preferences**

Marin-Solano, Jesus, Universitat de Barcelona, jmarin@ub.edu
Navas, Jorge, Universitat de Barcelona, jnavas@ub.edu
Ribas, Carmen, Universitat de Barcelona, cribas@ub.edu
Roch, Oriol, Universitat de Barcelona, oroch@ub.edu

16:30 **Multi-Fold Compound Options and Principal Protected Notes Valuation**

Ndoye, Mbaye, HEC Montréal, mbaye.ndoye@hec.ca
Breton, Michèle, GERAD, HEC Montréal, michele.breton@hec.ca

17:00 **Solvency Capital Requirement for Insurance Products via Dynamic Cash Flow Matching under Lattice Models**

Ma, Alfred Ka Chun, Chinese University of Hong Kong, alfredkcma@cuhk.edu.hk
Cheung, Yuen Ki, JP Morgan, justina.yk.cheung@jpmorgan.com

17:30 **Farewell Drink | L'Oréal**

Author Index

May 1 Room	IBM	Mary Husny	St-Hubert	CPA du Québec	Serge-Saucier
08:00 - 08:45	Registration | Tata Communications				
08:45 - 09:00	Welcome Address | IBM				
09:00 - 10:00	**WAP** Plenary 1				
10:00 - 10:30	Coffee Break | Investissement Québec				
10:30 - 12:30		**WA1** Vehicle Routing I	**WA2** Smart Grids	**WA3** Dynamic Games and Applications I	**WA4** Investment and Operational Decision Making in Energy Markets
12:30 - 14:00	Lunch | L'Oréal				
14:00 - 15:30		**WB1** Tutorial 1	**WB2** Robust Optimization I	**WB3** Portfolio Management and Insurance Models	**WB4** Energy Market Models I
15:30 - 16:00	Coffee Break | Investissement Québec				
16:00 - 17:30		**WC1** Financial Modeling and Analysis I	**WC2** Robust Optimization II	**WC3** Dynamic Games and Applications II	**WC4** Energy Risk: Empirical Applications
18:00 - 20:00	Wine & Cheese Party | L'Oréal				

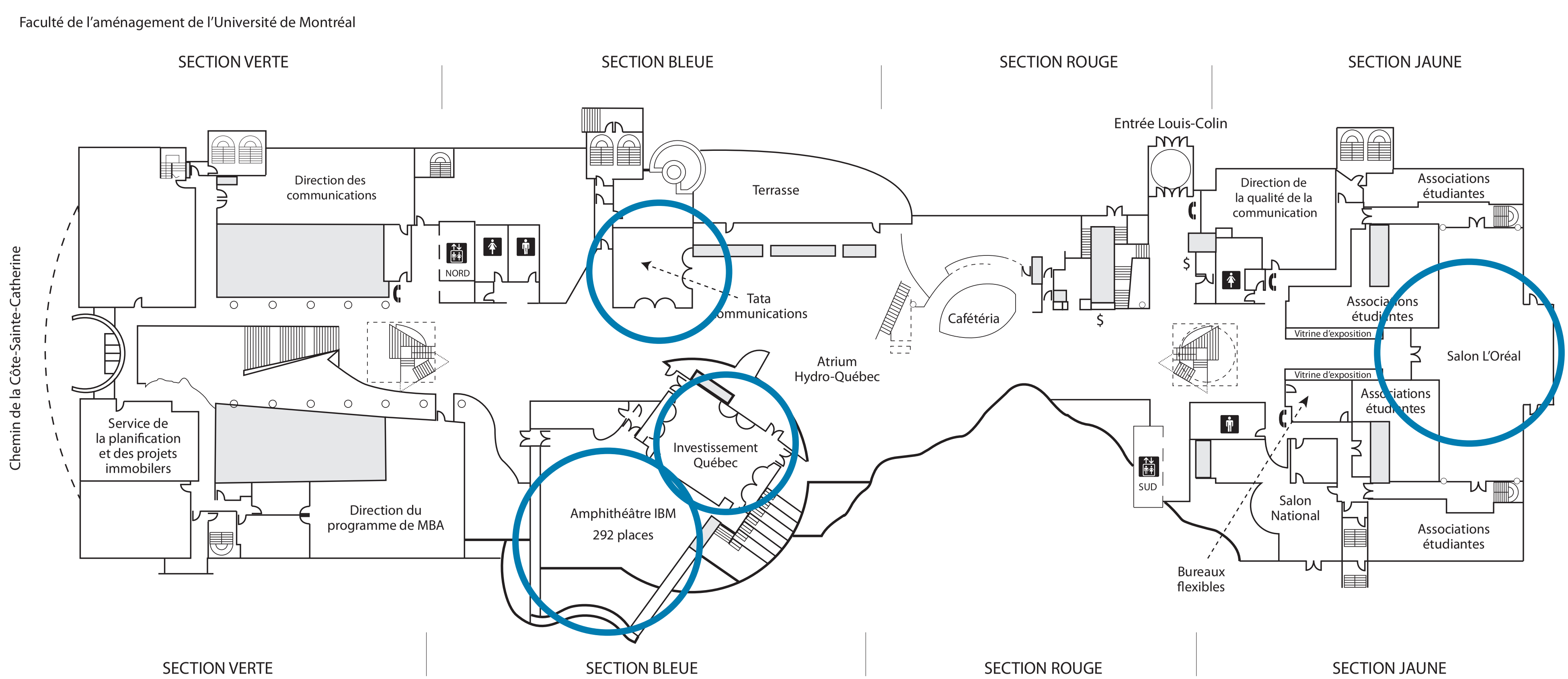
May2 Room	BDC	Mary Husny	St-Hubert	CPA du Québec	Serge-Saucier
09:00 - 10:00	**TAP** Plenary 2				
10:00 - 10:30	Coffee Break | Investissement Québec				
10:30 - 12:30		**TA1** Vehicle Routing II	**TA2** Stochastic Models in Power Generation I	**TA3** Dynamic Games and Applications III	**TA4** Statistical Computing
12:30 - 14:00	Lunch | L'Oréal				
14:00 - 15:30	**TB1** Tutorial 2	**TB2** Dynamic Games and Applications IV	**TB3** Multistage Stochastic Programming		**TB4** Financial Modeling and Analysis II
15:30 - 16:00	Coffee Break | Investissement Québec				
16:00 - 17:30	**TC1** Tutorial 3	**TC2** Vehicle Routing III	**TC3** Stochastic Models in Power Generation II		**TC4** Financial Modeling and Analysis III

May 3 Room	BDC	Mary Husny	St-Hubert	CPA du Québec	Serge-Saucier
09:00 - 10:00	**FAP** Plenary 3				
10:00 - 10:30	Coffee Break | Investissement Québec				
10:30 - 12:30		**FA1** Vehicle Routing IV	**FA2** Energy Market Models II	**FA3** Dynamic Games and Applications V	**FA4** Revenue Management
12:30 - 14:00	Lunch | L'Oréal				
14:00 - 15:30	**FB1** Tutorial 4	**FB2** Combinatorial Optimization	**FB3** Operations Management		**FB4** Financial Modeling and Analysis IV
15:30 - 16:00	Coffee Break | Investissement Québec				
16:00 - 17:30		**FC1** Transportation	**FC2** Stochastic Programming	**FC3** Dynamic Games and Applications VI	**FC4** Financial Modeling and Analysis V
17:30 - 18:30	Farewell Drink | L'Oréal				

HEC Montréal
Édifice Côte-Sainte-Cathetine

3000, chemin de la Côte-Sainte-Catherine
Montréal (Québec) H3T 2A7

RJ



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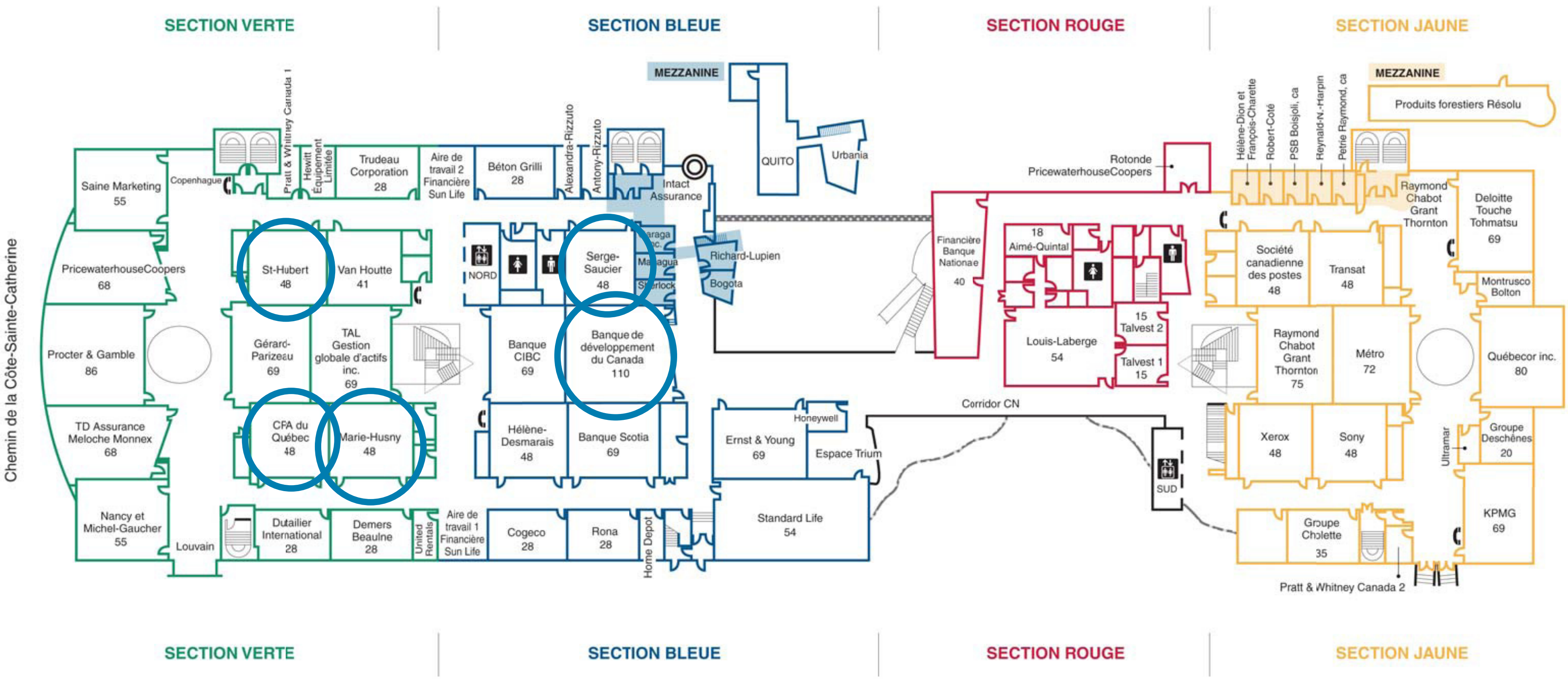
3000, chemin de la Côte-Sainte-Catherine
Montréal (Québec) H3T 2A7

PLAN DES SALLES DE COURS ET SALLES D'ÉTUDE

1ER ÉTAGE



Le chiffre inscrit en dessous du nom de la salle indique le nombre de places disponibles.
DÉCEMBRE 2012