



The CORS Bulletin

VOLUME 51, NUMBER 1 – FEBRUARY 2017
ISSN 0315-1417

TABLE OF CONTENTS

PAGE

In This Issue	2
The 2016–2017 Council	3
President's Message	4
2017 CORS/IFORS Conference in Québec City, QC	5
Call for Nominations: 2017–2018 Council Positions	6
Announcements	6
CORS Funding Opportunities	7
Graduate Student Funding	7
CORS Travelling Speakers Program	7
CORS Practice Prize Competition	8
CORS Student Paper Competition	9
Council Corner	10
CORS Special Interest Groups (SIGs)	11
CORS SIG News	12
Section and Chapter News	15
Meetings and Conferences	17
The Next Issue	18
CORS Bulletin Translation Policy	18
CORS Bulletin Advertising Policy	18
CORS ListServ	18

IN THIS ISSUE

Dear CORS Members,

In this issue, our president Dionne has lots of exciting news from the latest council meeting, including a special incentive to attend this year's conference, so please be sure to read her message in its entirety.

Speaking of the conference, now is the time to submit your abstracts, book your travel, and start getting excited about a beautiful Quebec summer. There are many avenues for participating this year, and you can read all about them in this bulletin.

The call for nominations for a number of council positions is out. Please consider nominating a fellow CORS member to serve as an officer, and note that the submission deadline is **March 24, 2017**.

If you have content you would like to see in the next bulletin, please submit it to me at AndreaFriars@gmail.com

Cheers,

Andrea Friars

Editor

Editor

Andrea Friars

Publisher

CORS/SCRO
Box/C.P. 2225, Station D
Ottawa, ON K1P 5W4

Distributor

Erla Anderson

Elected Officers

President

Dionne Aleman

Vice-President

Louis-Martin Rousseau

Past-President

Fredrik Ødegaard

Secretary

Peter VanBerkel

Treasurer

Sonia Vanderby

Councillors

Tatsiana Levina (15/17)

Michael Pavlin (15/17)

Stanko Dimitrov (16/18)

Anjali Awasthi (16/18)

Standing Committees

Awards

Louis-Martin Rousseau,

Stanko Dimitrov, Michael Pavlin

Education

Mehmet Begen

Membership

Michael Pavlin

Program

Louis-Martin Rousseau,

Marko Bijvank,

Bernard Gendron

Dionne Aleman

Public Relations

Samir Elhedhli, Elkafi Hassini,

Publications

Andrea Friars

Past Presidents

Dionne Aleman,

Advisory Board

Fredrik Ødegaard, Peter Bell,

David Martell, Rick Caron

SIG

Louis-Martin Rousseau

Section Relations

Anjali Awasthi,

Tatsiana Levina,

Sonia Vanderby

Ad hoc Committees

Practice Prize

Mikael Rönqvist

Student Paper

Nadia Lahrichi

Competition

Stan Dimitrov

Award of Merit

Fredrik Ødegaard,

Jean-François Cordeau,

Tamás Terlaky

Financial Planning

Sonia Vanderby,

Fredrik Ødegaard,

Dionne Aleman,

Louis-Martin Rousseau

Analytics

Tatsiana Levina, Peter Bell,

Marie-Claude Côté

Industry

Dionne Aleman,

Fredrik Ødegaard,

Hatem Ben Amor

Fredrik Ødegaard

Fredrik Ødegaard

Nominating

Travelling Speakers

Program

Samir Elhedhli, Elkafi Hassini

INFOR Co-Editors

Andrea Friars

Bulletin Editor

Peter VanBerkel

IFORS Representative

Membership Services

Erla Anderson

Web Administrator

Erla Anderson

WWW

www.cors.ca

THE 2016–2017 COUNCIL

CORS Council is made up of the officers of the society, four councillors, the immediate past president, a representative designated by each local section and chapter of the society, and the standing committee chairs. Contact information for council representatives is below. For a complete listing go to www.cors.ca

President	Dionne Aleman, University of Toronto, aleman@mie.utoronto.ca
Vice-President	Louis-Martin Rousseau, École Polytechnique de Montréal, louis-martin.rousseau@polymtl.ca
Secretary	Peter VanBerkel, Dalhousie University, peter.vanberkel@dal.ca
Treasurer	Sonia Vanderby, University of Saskatchewan, sonia.vanderby@usask.ca
Past-President	Fredrik Ødegaard, University of Western Ontario, fodegaard@ivey.uwo.ca
Councillor	Tatsiana Levina, Queen's University, tlevin@business.queensu.ca
Councillor	Michael Pavlin, Wilfrid Laurier University, mpavlin@wlu.ca
Councillor	Stanko Dimitrov, University of Waterloo, sdimitro@uwaterloo.ca
Councillor	Anjali Awasthi, Concordia University, anjali.awasthi@concordia.ca
Atlantic	Claver Diallo, Dalhousie University, claver.diallo@dal.ca
Québec	Irène Abi-Zeid, Université Laval, irene.abi-zeid@osd.ulaval.ca
Montréal	Miguel Anjos, École Polytechnique de Montréal, miguel-f.anjos@polymtl.ca
Ottawa	Dragos Calitoiu, Bank of America, Ottawa, calitoiu@optimod.ca
Kingston	Jeffrey I. McGill, Queen's University, jmcgill@business.queensu.ca
Toronto	Joseph Milner, University of Toronto, milner@rotman.utoronto.ca
Southwest Ontario	Joe Naoum-Sawaya, University of Western Ontario, jnaoum-sawaya@ivey.ca
Winnipeg	Currently vacant
Saskatoon	Winfried Grassmann, University of Saskatchewan, grassman@cs.usask.ca
Calgary	Mozart Menezes, University of Calgary, mozart.menezes@haskayne.ucalgary.ca
Edmonton	Armann Ingolfsson, University of Alberta, armann.ingolfsson@ualberta.ca
Vancouver	Stuart Donald, University of British Columbia, stuart.donald@sauder.ubc.ca
Toronto Student	Kyle Booth, University of Toronto, kyle.booth@mail.utoronto.ca Christopher Sun, University of Toronto, christopher.sun@mail.utoronto.ca
Waterloo Student	Abdelhalim Hiassat, University of Waterloo, ahhiassat@uwaterloo.ca
Québec Student	Samira Abbasgholizadeh Rahimi, Université Laval, samiraheme@yahoo.com
Montréal Student	Carlos Armando Zetina, Concordia University, c_zetina@encs.concordia.ca

PRESIDENT'S MESSAGE

Happy 2017 CORS!

I hope everyone is filled with hope and optimism for the coming year ... at least here on the north side of the border. I am optimistic that these negative temperatures will turn positive soon, and that my morning office routine will soon not primarily consist of standing in front of the radiator warming my hands.

On Council's end, we just had our annual face-to-face meeting, and we have a few new and exciting initiatives. First, we have a new Section dues formula to streamline, simplify, and speed up dues payments. Easier funding to the Sections means less time spent on administration and more time spent providing quality services to CORS members. Second, if you were on the fence about attending CORS/IFORS in July, we have something to sweeten the pot: **A free year of CORS membership!**

That's right, if you register to attend CORS/IFORS, not only will you get to experience an amazing conference rich in international OR prestige, but you will also get a free year of CORS membership. We are also increasing the available graduate student travel funding by 50%, so don't shy away from sending your students. Conference registration and abstract submission are both open now at <http://ifors2017.ca/>, so get cracking and don't miss the early bird rates!

We will also open a competition to submit designs for a new, modern logo for CORS. The old logo has special meaning – the triangle represents the cities of the three founding groups of CORS (Hamilton, Montreal, and Toronto), and the person inside the triangle is shaped like "OR". But, it is time to consider freshening up our appearance. Finalists will receive \$100 and a chance to have their design immortalized on the CORS website, conference banners, and official documents. Members will then vote between the finalists' designs and the old logo. Keep an eye out for listserv announcements with instructions soon.

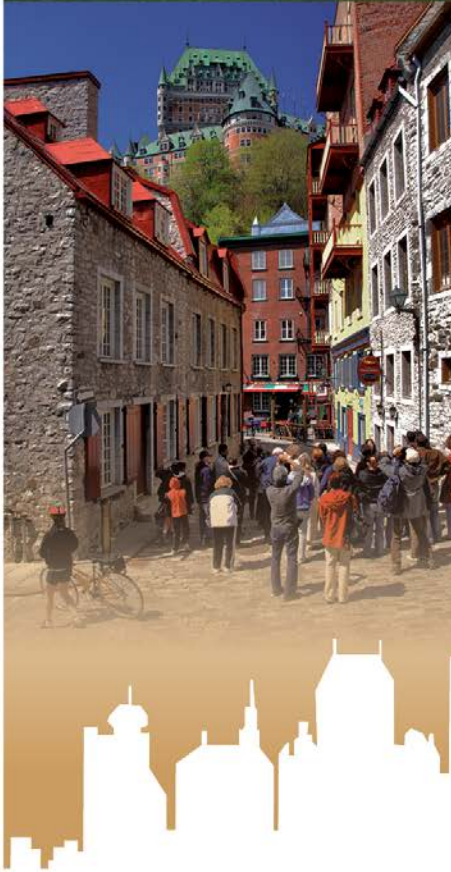
Finally, Vice-President Louis-Martin Rousseau will be unable to serve as President for the 2017–18 year, so a special election will be held at the AGM at CORS/IFORS to elect the next President. Please send any nominations to me (aleman@mie.utoronto.ca). Note that candidates for President must have previously served at least one year on Council.

Best wishes for new ideas, new papers, and new grants in 2017!



Dionne Aleman
@CORS_President





IFORS 2017

July 17-21, 2017

Join us in Québec City!

SUBMIT YOUR ABSTRACT

Abstract submission deadline: February 10, 2017
Click here: www.euro-online.org/conf/ifors2017

REGISTRATIONS WILL OPEN SOON!

Stay tuned: ifors2017.ca

BOOK YOUR ACCOMMODATION

Hotel space is limited.
Book early: ifors2017.ca/accommodation



IFORS2017.CA

21st conference of the
International Federation of Operational
Research Societies

Hosted by CORS

CALL FOR NOMINATIONS

2017–2018 Council Positions

President

The President oversees the general management of the Society in accordance with the CORS Constitution. After a one-year term, the President then steps into the role of Past President for one year. The Past President's primary role is to advise the incoming President and Council.

Vice-President (President Elect)

The Vice President (one-year term) assists the President, participates in special projects and ad-hoc committees through the year, and takes over the role of President at the following Annual General Meeting (AGM).

Two Councillors (Two-year term)

A total of four councillors sit on council, and participate in the management of the society. Often, councillors are called upon to chair or serve on ad hoc or standing committees, and work on special projects.

For more details on the responsibilities of each officer, please see our Administrative Handbook online at www.cors.ca/?q=content/library All nominees will be contacted and asked to provide a write-up for the May edition of the Bulletin.

To nominate a CORS member to serve in one of these positions, please send his/her name and contact information by **March 24, 2017** to **Fredrik Ødegaard** (fodegaard@ivey.uwo.ca).

ANNOUNCEMENTS

It's time to renew your CORS membership

Don't forget to renew your CORS membership **before April 1, 2017**. The membership year begins on April 1 and ends on March 31 of the following year. Go to www.cors.ca to renew online or mail your credit card information or a cheque payable to the Canadian Operational Research Society to CORS, BOX 2225, STATION D, OTTAWA, ON, K1P 5W4. If you do not wish to continue as a member of the Society, please contact Membership Services at membershipservices@cors.ca

Follow CORS on LinkedIn

www.linkedin.com/company/canadian-operational-research-society



CORS FUNDING OPPORTUNITIES

Graduate Student Funding

CORS funds graduate students attending CORS annual meetings, using funds from SSHRC, when available. This funding is subject to availability and the following eligibility criteria:

- Student is a member of CORS
- Student is enrolled in a graduate program in a field related to operational research
- Student is studying at a Canadian university, or student is a Canadian citizen or permanent resident studying abroad
- Student must attend the conference and present their registration receipt to receive any funding

The following criteria will be used to determine the amount awarded to each eligible applicant:

- If the applicant is presenting a paper at the conference.
- Travel cost from student's home city to the conference

Instructions (<http://www.cors.ca/?q=content/graduate-student-funding>)

Applicants fill out the online application form. Fill out the expense reimbursement form, and bring the form and your receipts to the 2017 CORS Conference registration desk.

Applications must be received by **April 15, 2017** to receive full consideration. Applicants who meet this deadline will be notified at least one month before the conference date whether their application was successful.

For further information, contact:
Mehmet Begen, Education Chair (mbegen@ivey.uwo.ca)

Traveling Speakers Program

The Traveling Speakers Program (TSP) enables local sections to bring Canadian OR practitioners / researchers as speakers to their local events. In order to keep costs in line while maximizing the CORS national profile, CORS sponsorship will be limited to 50% of the total expenses, up to a maximum of \$500 per speaker or \$1000 for a single event (conference, workshop). Other expenses can be covered by the local section. The program of the event must acknowledge the contribution of CORS. Each local section must contact the TSP coordinator to obtain approval for funding preferably at least one month in advance of the event date. Payment will be made by the CORS Treasurer upon receipt of the expense form (<http://www.cors.ca/?q=content/traveling-speakers-program>).

Applications are to be submitted to:
Fredrik Ødegaard, TSP Coordinator (fodegaard@ivey.uwo.ca)

CORS Practice Prize Competition

The Practice Prize Competition recognizes the outstanding application of OR by practitioners in Canada and it attracts quality papers to the CORS Annual Conference.

Award: The Prize Committee will determine, at its discretion, First, Second and Honourable Mention awards and the distribution of up to \$1800 in prize money according to the extent to which the finalists have reported on a completed, practical application with results that had a significant, verifiable and (preferably) quantifiable impact on the performance of the client organization. Every member of the winning teams receives a certificate.

Eligibility: The applicant must be a resident of Canada. The submission must include work completed over the last two years, but the entire project may have taken place over a longer period. The project may include published work, but it cannot have been previously submitted to this competition.

Process

By **March 31, 2017**, submit e-copies of the following to:

Mikael Rönnqvist, Chair of the Practice Prize Committee (mikael.ronqvist@gmc.ulaval.ca)

1. An abstract, not exceeding 500 words, outlining the successful application of OR.
2. A letter from an executive of the client organization attesting that the application had an impact and giving permission for the project to be presented at the CORS Annual Conference.
3. The names, titles, phone numbers and email addresses of all authors and of at least one executive of the client organization.

By **May 12, 2017**, the judging committee, consisting of three past winners of the Practice Prize, will select up to four finalists according to the following criteria:

1. The challenge of the application of OR and the significance of the problem.
2. The quality of the analysis and modeling, and implementation of the results.
3. The impact on the client organization.

By **June 23, 2017**, the finalists must:

1. Submit a detailed written report, not exceeding 25 pages in the body, presenting a "case history" of the project describing its development from start to finish and focussing on the challenges and results.
2. Submit a one page project summary, suitable for publication in the CORS Bulletin and on the CORS website.
3. Present the project at the Practice Prize Sessions at the CORS Annual Conference.

On the basis of the written report and the oral presentation, the judges will determine the prizes to be awarded and announced at the banquet. The committee reserves the right not to award any prize.

CORS Student Paper Competition

Each year the Canadian Operational Research Society conducts a student paper competition to recognize the contribution of a paper either directly to the field of operational research through the development of methodology or to another field through the application of operational research. The competition serves to showcase the high quality of OR education in Canada as well as the excellence of the new generation of operational researchers. Prizes are awarded in two categories: Undergraduate and Open.

Requirements: The applicant must be enrolled as a full-time student in a Canadian institution, in an undergraduate, masters, or PhD program during the school year 2016 to 2017. Canadians who are studying outside of Canada are also eligible. Applicants in undergraduate programs are eligible to apply in both categories: Open and Undergraduate. To be eligible for First Prize or Honourable Mention, selected articles must be presented at the CORS Annual Conference. This rule applies to both categories: Open and Undergraduate.

Instructions

Applicants fill out the online application form (<http://cors.ca/?q=content/student-paper-competition>). The form is automatically submitted to the Chair of the competition.

The application deadline for the Open Category is **April 15, 2017**.

For the Undergraduate Category, candidates must submit their intent to participate by sending an email with the title and abstract to spc@cors.ca. The deadline to indicate your intent to participate is **March 15, 2017**. The full paper should be submitted by **April 15, 2017**.

The Chairs of the competition are:

Open Category: Nadia Lahrichi (nadia.lahrichi@polymtl.ca)
Undergraduate Category: Stan Dimitrov (sdimitro@uwaterloo.ca)

The entry includes:

1. Abstract of 200 words or less. Author's name, address, phone number, and email address.
 - Make sure the abstract clearly highlights the motivation, contribution, and potential impact of the paper.
2. Academic institution and supervisor's name, if applicable.
3. Indication of whether the author is planning to attend the conference regardless of the outcome.
 - Note that papers selected as Finalists must be presented at the conference in order to further be considered for First Prize or Honourable Mention.
4. Indication of whether the paper is submitted to a journal.

5. A PDF copy of the paper:
 - No longer than 35 pages (with minimum 1-inch margins, maximum 34 lines per page and minimum font size of Times 11) including all figures, tables, appendices, and references.
 - With separate title page containing the name of the authors, their coordinates and affiliations. Please ensure there are no identifiers on the other pages;
6. An email from the supervisor indicating that the participant is the first author of the paper should be sent to the Competition Chair.
7. Selection Criteria
 - Contribution of the paper either directly to the field of Operational Research through the development of methodology or to another field through the application of Operational Research.
 - Originality.
 - Writing style, clarity, organization and conciseness of the paper.

Awards

Open Category: First Prize \$500, Honorable Mention \$100

Undergraduate: First Prize \$200, Honorable Mention \$50

All papers selected as Finalists receive a certificate.

If an undergraduate wins the open competition, no undergraduate prize will be awarded. In the case of close competition, papers not winning an award may receive honourable mention.

Finalists selected for the undergraduate category will be eligible to apply for partial funding to attend the CORS Annual Conference. The Education Chair will contact finalists with details.

COUNCIL CORNER

This section of the CORS Bulletin will highlight recent discussions by the CORS Council and motions of particular interest that have been passed.

- Council approved the following new Sections funding formula: $\text{Section Funding} = \text{Average}(\text{previous year's expenditures, coming year's budget}) - 0.75(\text{bank balance})$. The Rationale: activity based costing of previous method maintained; tempers high upcoming year budgets, takes into account current (year-end) funds available; easy to calculate.
- CORS 2018 will take place at the brand-new Halifax Convention Centre (120,000 square feet of event space in the heart of downtown) from June 4–6, 2018.

CORS SPECIAL INTEREST GROUPS

CORS Council approved a policy on Special Interest Groups (SIGs). A SIG provides a mechanism to promote CORS, the SIG area and the SIG members, as well as the opportunity for CORS members with common interests to interact and network.

SIGs formed so far include:

- **CORS Forestry SIG**
contact Claudia Cambero (claudia.cambero@fpinnovations.ca)
Modeling and Decision Support Group, FPInnovations
www.cors.ca/SIG/Forestry
- **CORS Health Care Operational Research SIG**
contact Armann Ingolfsson (armann.ingolfsson@ualberta.ca)
Alberta School of Business, University of Alberta
www.cors.ca/SIG/HCOR
- **CORS Queueing Theory SIG**
contact Steve Drekić (sdrekić@uwaterloo.ca)
Department of Statistics & Actuarial Science, University of Waterloo
www.cors.ca/SIG/Queueing

If you would like to join a SIG, contact the people listed above, or indicate that you would like to join when you renew your CORS membership.

CORS encourages members with common interest in an area within or related to operational research to form additional SIGs. More information about SIGs can be found online at www.cors.ca/?q=content/communities Discussions are underway about forming SIGs in several additional areas.

If you are interested in forming a SIG in a particular area, contact:

Louis-Martin Rousseau, SIG Committee Chair (louis-martin.rousseau@polymtl.ca)

SIG NEWS

Forestry

Abstract submission to CORS Forestry Cluster at 2017 CORS/IFORS Conference

The Forestry SIG encourages contributions to the CORS Forestry cluster at the 2017 CORS/IFORS Joint Conference to be held in Quebec City from July 17–21. This year, the CORS Forestry cluster will be composed of the following sessions:

- Managing flammable landscapes under uncertainty
- OR applications in the forest product sector I and II
- Interfirm collaboration in the forest sector
- OR applications in forest management
- Logistics planning in forest value chains
- Strategic forest planning
- Biorefinery supply chains
- Forest resources management
- Integrated forest value chains

Another cluster will be dedicated to biomass-based supply chains, and will be comprised of the following sessions:

- Uncertainties in biomass-based supply chains
- Optimization of biomass-based supply chains
- Logistics and transportation in biomass-based supply
- Investment decisions, feasibility and market analysis
- Sustainability and multi-objective optimization of biomass-based supply chains

Abstracts can be submitted at <http://ifors2017.ca> and the deadline for abstract submission is **February 10**.

Call for applications to the David Martell Student Paper Prize in Forestry

The Forestry SIG also encourages students to submit their papers to the 4th edition of the David Martell Student Paper Prize in Forestry. See competition details at:

<http://www.cors.ca/SIG/Forestry/?q=content/student-paper-competition> Please note that **February 10** is the EXTENDED submission deadline.

In search of a new FSIG President

As stated in the FSIG bylaws, a new President must be elected in 2017. The president of the FSIG would like to thank Mustapha Ouhimmou (ÉTS) and Jean François Audy (UQTR) who kindly accepted to serve as the Election Committee that will handle this democratic election process. All FSIG members are invited to submit their nominations to the Election Committee through email (Mustapha.Ouhimmou@etsmtl.ca; Jean-Francois.Audy@uqtr.ca) by **March 30**,

2017. Please note that self-nominations are encouraged and that no nomination shall be made to the Election Committee without such candidates agreeing to be nominated. The election process will lead to the President announcement at the next annual meeting in Quebec City at the CORS/IFORS Conference.

If you have questions or comments regarding the Forestry SIG, or if you would like to join, please contact Claudia Cambero at: claudia.cambero@fpinnovations.ca

Health Care Operations Research

IFORS/CORS conference call for abstracts due Feb. 10

The CORS/IFORS 2017 deadline for abstract submissions is rapidly approaching (**February 10**). It would be nice to have a strong showing of sessions with the CORS HCOR SIG label so please consider contributing a session. Sessions are typically 90 minutes consisting of four speakers. Please email peter.vanberkel@dal.ca to submit a session.

HCOR student presentation competition – details for application and deadlines

The CORS Health Care Operations Research SIG oral presentation competition for graduate students competition emphasizes the importance of presentation skills and provides an opportunity for students to receive formal feedback, learn best practices from their peers, and be recognized for excellence in this area.

The goal is to have students demonstrate mastery of coherent and engaging presentations describing a completed research project on a significant healthcare topic within a five-minute time limit. The competition will involve self-videotaped presentation submissions judged on presentation quality and quality of the research. Judge-chosen finalists will be invited to give their presentation at IFORS 2017 in Quebec, QC (July 17–21).

The deadline for self-videotaped presentations is **April 15, 2017** with the announcement of finalists expected by **June 1, 2017**. Submission process details will follow on the CORS website and via the CORS email listserv. For further information please contact Nadia Lahrichi (nadia.lahrichi@polymtl.ca).

Upcoming conferences

- 59th CORS Annual Conference Joint with IFORS: July 17–21, 2017 in Quebec City, Quebec <http://ifors2017.ca/>
- INFORMS Healthcare 2017: July 26–28, 2017 in Rotterdam, Netherlands <http://meetings2.informs.org/wordpress/healthcare2017/>
- ORAHS 2017 Annual Meeting: July 30–August 4, 2017 in Bath, UK <http://orahs.di.unito.it/>

Final Thoughts

Don't forget to check out our new website: <http://www.cors.ca/SIG/HCOR> You'll find HCOR related news, current officers and their contact emails, member list, upcoming events and conferences and more! If you have any relevant news you'd like to share with the HCOR members, including upcoming events, conferences, job/student opportunities, please email the Communications Officer Daphne Sniekers (daphnesniekers@gmail.com).

Queueing Theory

Planning is in the works for the Queueing Cluster at the upcoming joint CORS/IFORS Conference in Quebec City, to be held July 17–21, 2017. If you wish to get involved and are interested in organizing a session or giving a talk, please contact Steve Drekić (sdrekić@uwaterloo.ca). We will do our best to get you on the schedule!

This year's edition of CanQueue is scheduled to take place in Windsor. Myron Hlynka is this year's organizer of the event. Although dates have not been officially confirmed yet, details concerning the conference can be found at <http://web2.uwindsor.ca/math/hlynka/canqueue2017.html>

SECTION & CHAPTER NEWS

Montreal Student Chapter

www.mtl-students.com

Our newsletter, scheduled to be available at the end of January, will include highlights of MORSC events of 2016, upcoming conferences for 2017, an interview with Prof. Andrea Lodi, as well as a few other articles. The newsletter will be distributed to our members, published on our website and our social media profiles in both English and French.

Section Montréal de la SCRO – Double séminaire sur les applications de la RO CORS Montreal Section – Double Seminar on Applications of OR

Date: Monday 20 February 2017

Time: 13:30–15:30

Location: GERAD, Room 4488, André-Aisenstadt Building, Université de Montréal Campus

Ce séminaire vous permettra d'échanger avec les conférenciers et les chercheurs présents autour de boissons et de collations.

This seminar will give you the opportunity to meet the speakers and the researchers in attendance while enjoying drinks and snacks.

Au plaisir de vous y rencontrer,
We look forward to seeing you then,

Fabian Bastin, Louis-Martin Rousseau et Miguel Anjos

=====

13:30–14:30 – First Speaker:

Andre Cire, Department of Management at University of Toronto Scarborough

Title: [Dynamic scheduling of home care patients to medical providers](#)

Abstract:

Home care aims at providing personalized medical care and social support to patients within their own home. It allows patients to avoid unnecessary hospital costs and either prevents or postpones long-term institutionalization. Since 2014, it has been the fastest-growing US industry attending to more than 14 million patients per year. In this work we propose a dynamic scheduling framework to assist in the assignment of patients to home care practitioners (or

HPs). An HP attends to the individual for the entirety of their care (continuity of care requirement) and must travel to their homes in order to serve them. We formulate the assignment of patients to HPs within a home care agency as a discrete-time Markov decision process (MDP). We consider the amount of service each HP provides per period, the expected number of remaining visits a patient will need with an HP, and the total time an HP spends in-transit serving their patient panel. Due to the curse of dimensionality and the complex underlying combinatorial structure of the problem, we propose a one-step policy improvement heuristic that builds upon the agencies existing assignment strategy. Specifically, we apply machine-learning techniques to learn different probabilistic policies from historical data, and formulate the one-step improvement problem as an exponentially-sized mathematical programming model. Such a model can be solved using a Benders decomposition approach that simultaneously provides upper and lower bounds at each iteration. It can also be stopped at any desired optimality gap. We derive a new relaxation to speed-up the convergence of our method and show sufficient conditions under which this relaxation is solved efficiently. Several extensions account for patients that return for service, multiple HP assignments per patient, and patients who need periodic service are also provided. We test the quality of our solution methodology with data from a Canadian home health care provider to assess the service improvement as compared to their existing policies.

=====

14:30–15:30 – Second Speaker:
Daniel Sallier, Bombardier

Title: [Mid and long-term passenger demand forecast: The Kenza approach](#)

Abstract:

I invented in early 1995 and developed since a behavioural method for passenger demand forecasting. This method is called the Kenza approach. It has been initially used by Airbus Industrie in the late 90s and represents, [today](#), the primary demand medium and (very) long term forecasting tool of Aéroports de Paris (CDG & Orly). It has been selected by the Korean Ministry of Transport (MOLIT) in 2014 for the long term passenger demand forecast of South-East Korea. Because of very long lead-time developments and even longer life cycles of their products/infrastructures, both aircraft and engine manufacturers, airports and civil aviation authorities, if not the financial community, do have very strong methodological expectations which would fully supported long term forecasting techniques. One of the main anticipated assets of the Kenza approach is to provide a better assessment and understanding on how the demand elasticity is likely to evolve in the future. To start with we illustrate the conceptual difference between behavioural approaches and econometric/statistic ones for forecasting purposes. To continue the empirical concepts leading to the 1st Kenza law of demand will be exposed and discussed. Then special attention will be paid to demand elasticity properties as they result from the Kenza law of demand. To finish with the US domestic market will be used as a benchmark basis for comparing different long-term forecasting models: the Kenza approach and more classical econometrical ones.

MEETINGS AND CONFERENCES

CORS Business Meetings

June 1, 2016	CORS Council Meeting, Banff, AB
August 26, 2016	CORS Council Meeting, Teleconference
November 25, 2016	CORS Council Meeting, Teleconference
January 27, 2017	CORS Council Meeting, Toronto, ON
March 31, 2017	CORS Council Meeting, Teleconference
April 28, 2017	CORS Financial Planning Committee Meeting
June 30, 2017	CORS Council Meeting, Teleconference
July 16, 2017	CORS Council Meeting, Quebec City, QC
July 17, 2017	CORS Council Meeting, Quebec City, QC
July 18, 2017	CORS Annual General Meeting, Quebec City, QC

CORS Annual Conferences

July 17–21, 2017	CORS/IFORS Conference, Quebec City, QC
June 4–6, 2018	CORS Annual Conference, Halifax, NS

WWW Conference Listings

CORS Conference Page: www.cors.ca/?q=content/cors-annual-conferences
INFORMS Conference Home Page: www.informs.org/attend-a-conference
IFORS Conferences: www.ifors.org/web
Netlib Conferences Database: <ftp://ftp.cc.ac.cn/netlib/confdb/Conferences.html>
SIAM Conference Home Page: www.siam.org/meetings/calendar.php
POMS Conference Page: www.poms.org/conferences
EURO Conferences : www.euro-online.org/web/pages/460/calendar

THE NEXT ISSUE

The next issue of the Bulletin is scheduled to appear in May. Along with the regular features and news from the local sections, it will include more information about the next CORS conference. Contributions to this issue, especially news on the activities of local sections or CORS members, should be submitted by **April 14, 2017** to:

Andrea Friars
Editor, CORS Bulletin
11 Sawgrass Drive
Oakfield, NS B2T 0G1
Phone: 902-895-8430 ext. 3236
Email: AndreaFriars@gmail.com

The preferred method of submission is by an MS-Word attachment to an email.

CORS BULLETIN TRANSLATION POLICY

Items that are CORS business will be translated into English and French. All other items will be published in the language they are submitted in.

CORS BULLETIN ADVERTISING POLICY

Ads cost \$120 per page, proportional for fractional pages. Logos and prepared layouts can be accommodated. This fee also includes distribution of the advertisement on the CORS ListServ. Direct inquiries to the Editor.

CORS LISTSERV

As a benefit of membership, members may use the CORS ListServ to transmit messages, announcements, and job postings to the entire membership or to a targeted subgroup such as a local section. For example, you can send

- messages regarding the activities and business of the society;
- announcements about conferences, conference sessions, special journal issues, seminars or other activities provided that these are related to operational research in its broadest sense;
- job postings of general interest to CORS members.

The ListServ is not used for commercial purposes, and all messages are vetted before they are sent out. To submit items to the ListServ, email CORS Membership Services at membershipservices@cors.ca

For non-members, a fee of \$60 is charged for the distribution of job postings and other announcements or messages of interest to the CORS membership.



Canadian Operational Research Society
Société canadienne de recherche opérationnelle

The **Canadian Operational Research Society** was founded in 1958. Its goal is to advance the theory and practice of OR and to stimulate and promote contacts between people interested in the subject.

Publications: A quarterly scientific journal called *INFOR* and a news *Bulletin*.

Meetings: An annual national conference with an award ceremony, occasionally organized jointly with an international society (IFORS, INFORMS), and numerous local events organized by local sections.

Local Sections & Chapters: CORS has twelve local sections located throughout Canada and four student chapters.

Awards and Prizes: CORS presents the following annual awards and prizes at its annual conference:

Award of Merit for significant contributions of a present or past member of CORS to the profession of OR.

Harold Larnder Award to an individual who has achieved international distinction in OR.

Omond Solandt Award to an organization, private or governmental, that is deemed to have made an outstanding contribution to OR in Canada.

Practice Prize for the challenging application of the OR approach to the solution of applied problems.

Service Award for outstanding contributions of time and service to the society.

Student Paper Competition to recognize the contribution of a paper either directly to the field of OR through the development of methodology or to another field through the application of OR.

Graduate Student Funding: CORS encourages attendance of graduate students at its annual conference by providing partial funding. Visit CORS website for details.

CORS Diploma: This diploma is awarded to students graduating from a university curriculum comprising several OR courses. Criteria may be found on the CORS website.

Membership Directory: An online directory of CORS members is available as a membership benefit.

To join CORS: Go to the CORS website and join online by credit card using the form found under membership or complete the PDF application form found on the CORS website and mail it with payment to the address below.

Fees: Member \$110; Retired Member \$55; Student Member \$45 (including post-doctoral fellows)

Website: www.cors.ca

LinkedIn : www.linkedin.com/company/canadian-operational-research-society

CORS/SCRO BOX/C.P. 2225, STATION D, OTTAWA, ON, K1P 5W4

Atlantic Québec Québec Student Montréal Montréal Student Kingston Ottawa Toronto Toronto Student
Waterloo Student Southwest Ontario Winnipeg Saskatoon Calgary Edmonton Vancouver

www.cors.ca