



The CORs Bulletin

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In This Issue

Dear CORS members,

I am exceptionally pleased to introduce myself as your new CORS Bulletin Editor. Since I will also be serving as a CORS Councillor, I will have the perfect opportunity to learn more about the Society and to get to know many of the members who make CORS such a vibrant organization.

This is the post-conference issue of the Bulletin, and it includes reports on the full complement of CORS awards that were presented at the highly successful annual conference at Niagara Falls. Note in particular the articles on the Award of Merit, presented to Oded Berman (thanks to Armann Ingolfsson for this piece); the Solandt Award, presented to Navtech; and the one-time "Outstanding Administrative Award", presented to Wendy Caron to recognize her years of heartfelt devotion to CORS Member Services (thanks to Richard Caron for providing an affectionate report).

There have been many changes to the CORS Council and the committees; please see the listing of changes, as well as the comments of outgoing president Samir Elhedhli and incoming president Elkafi Hassini. We have an excellent photo of the new and improved CORS Rivett Mug, which was passed to the new president at the Annual General Meeting in Niagara Falls.

This issue also includes an "In Memoriam" article on the life of CORS member and ex-President George Lindsey. It was written by Eldon Gunn and is based upon his special presentation at the CORS annual conference on Dr. Lindsey's outstanding contributions to operational research.

Special thanks go to Mikael Rönqvist for taking the excellent photos of CORS award winners in this issue. Finally, be sure to take note of the preliminary announcement of the 2013 CORS Conference in Vancouver, and save the dates.

Cheers,

Diane Bischak
Editor

Editor

Diane Bischak

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Diane Bischak (12/14)
Jonathan Patrick (12/14)

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Practice Prize
Student Paper
Competition
Solandt Award
Larnder Prize
Service Award
Merit Award

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Anjali Awasthi
Taraneh Sowlati
Taraneh Sowlati
Corinne MacDonald
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Eldon Gunn
Navneet Vidyarthi, Samir Elhedhli,
Elkafi Hassini, Corinne MacDonald

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Nominating

Samir Elhedhli

Constitution Review

Vinh Quan, Armann Ingolfsson,
Elkafi Hassini

Special Interest Groups

Doug Woolford, Elkafi Hassini,
Armann Ingolfsson

Strategic Planning
Committee

Corinne MacDonald,
Bernard Gendron, Elkafi Hassini,
Armann Ingolfsson

Travelling Speakers
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Erla Anderson
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The 2012–2013 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 of the Society, and the Standing Committee Chairs. Contact information for 2012–2013 Council representatives is provided below. For a complete listing go to www.cors.ca.

President	Elkafi Hassini, McMaster University, hassini@mcmaster.ca
Vice-President	Corinne MacDonald, Dalhousie University, corinne.macdonald@dal.ca
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Councillor	Jonathan Patrick, University of Ottawa, patrick@tefler.uottawa.ca
Councillor	Jennifer Percival, UOIT, jennifer.percival@uoit.ca
Councillor	Louis-Martin Rousseau, École Polytechnique de Montréal, louis-martin.rousseau@polymtl.ca
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Montreal	Louis-Martin Rousseau, École Polytechnique de Montréal, louis-martin.rousseau@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
SW Ontario	Fredrik Odegaard, University of Western Ontario, fodegaard@ivey.uwo.ca
Winnipeg	Currently vacant
Saskatoon	Winfried Grassmann, University of Saskatchewan, grassman@cs.usask.ca
Calgary	Maurice Elliott, Husky Energy, maurice.elliott@huskyenergy.ca
Edmonton	Armann Ingolfsson, University of Alberta, armann.ingolfsson@ualberta.ca
Vancouver	Taraneh Sowlati, University of British Columbia, taraneh.sowlati@ubc.ca
Toronto Student	Kimia Ghobadi, University of Toronto, kimia@mie.utoronto.ca
Waterloo Student	Tiffany Bayley, University of Waterloo, tamatuk@uwaterloo.ca

Recent Changes to Council and Committees

Post	Previous	New
Council		
President	Samir Elhedhli	Elkafi Hassini
Vice-President	Elkafi Hassini	Corinne MacDonald
Past President	Armann Ingolfsson	Samir Elhedhli
Councillor / Conseiller	Fredrik Odegaard Douglas Woolford	Diane Bischak Jonathan Patrick
Liaison Officer		
Atlantic	Bernard Gendron	Corinne MacDonald
Standing Committee		
Program	Elkafi Hassini	Corinne MacDonald
Ad hoc Committees		
Constitution Review		Elkafi Hassini
Financial Planning	Armann Ingolfsson	Corinne MacDonald
Larnder Prize	Elkafi Hassini	Taraneh Sowlati
Membership Recruitment & Retention		Folded into Membership Standing Committee
Merit Award	Bernard Gendron, Armann Ingolfsson	Oded Berman, Samir Elhedhli
Nominating	Armann Ingolfsson	Samir Elhedhli
Service Award	Elkafi Hassini	Corinne MacDonald
Solandt Award	Elkafi Hassini	Taraneh Sowlati
Special Interest Groups		Elkafi Hassini
Strategic Planning (new)		Corinne MacDonald Bernard Gendron Elkafi Hassini Armann Ingolfsson
Student Paper Competition	Fatma Gzara	Mehmet Begen
Travelling Speakers Program	Armann Ingolfsson	Samir Elhedhli
Presidents of Local Sections		
Calgary	Chandandeep Grewal	Maurice Elliott
SW Ontario	Matt Davison	Fredrik Odegaard
Toronto Student	Jonathan Y. Li	Kimia Ghobadi

Outgoing President's Message

Dear CORS members,

I cannot believe how fast the year went by. It has been an honour to serve the society and its members. Last year around this time, I set two main objectives in my opening speech: to make the society more appealing to its members and to balance the budget. The overwhelming support and attendance at the conference is a good indication of how well we did on the first goal. We had more than 370 attendees and more than 100 sessions in 13 parallel tracks. As I thought, a good academic and social program will always make waves. I hope this will continue in the future. The budget deficit is almost closed. The receipts have improved thanks to the conference profits, and the main issue with the expenses is identified. The journal has to at least break even. We have a plan in place that the incoming president, Elkafi Hassini, will pursue.

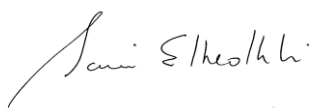


Samir Elhedhli

Last year saw some changes at the administrative level. After many years of exceptional service, Wendy Caron, the membership services provider, and Chirag Surti, the bulletin editor, have resigned. We are happy to have found good replacements. Please join me in welcoming Erla Anderson as membership services provider and Diane Bischak as bulletin editor.

Last year was Dionne Aleman's first year as secretary of the society. She did a fantastic job. Thank you, Dionne. I would also like to thank the council members that I had the privilege to work with: Elkafi Hassini, Navneet Vidyarthi, Armann Ingolfsson, Fredrik Odegaard, Doug Woolford, Jennifer Percival, Louis-Martin Rousseau, Bernard Gendron, Taraneh Sowlati, Vinh Quan; and Rick Caron for heading the Practice Prize committee.

I want to end my note with the Rivett Mug, which went through a major makeover. The old base is replaced with the new that includes the names of all past presidents (see the picture below). I will now hand in the mug to the incoming president, Elkafi Hassini, whom I wish all the success in running the Society. See you all next year in Vancouver.

A handwritten signature in cursive script that reads "Samir Elhedhli".

Samir Elhedhli



The Rivett Mug

Address of the Incoming President

Dear CORS Members,

I consider it as a privilege and a distinguished honour to serve as president of CORS. My first association with CORS started more than 15 years ago, interesting enough as a president of the University of Waterloo Student Chapter. In between I have served in different roles, notably as Bulletin editor and Treasurer and this year as a conference chair. Throughout this time I have known and worked with many people. I have benefited a lot from this network of highly motivated and professional people. I have also learned a lot from my involvement with CORS, for example I learned how to tie my tie yesterday. I find the intangible sense of collective achievement and motivational powers is what is driving CORS and that spills over and helps one's own professional life.



Elkafi Hassini

Therefore, I would like to take this opportunity to thank all those who have contributed to the well being of the society in any way, from as little as making sure they pay their dues on time to those who literally are putting all their family in the service of CORS, such as the Caron family. In particular, I would like to thank the outgoing president Samir Elhedhli for unwavering support and hard work during his presidency but also as a program chair for this year's conference. I would also like to thank Armann Ingolfsson, the past president, and Fredrik Odegaard and Douglas Woolford, the outgoing councillors.

I welcome Corinne MacDonald as vice president, Diane Bischak and Jonathan Patrick as new councillors, and all returning and new committee chairs. Finally, many thanks go to our new membership services provider Erla Anderson for all her support work.

I must also not forget to thank Kenneth Klassen for the wonderful job he did with local organization for this year's conference, as well as Belaid Aouni for his role in enriching this year's conference content with the invitation of respected international scholars.

Now I would like to talk about my vision for CORS in the next five to ten years. It may sound too ambitious to talk about a long term vision while the presidency term is only for one year. However, I believe that it is important for the society to set up a strategic plan and have an operational plan to make it work through multiple consecutive presidential terms. To this end, one of my goals in the next year is to set up some structure that would develop such a strategic plan, the purpose of which is to make sure the society has a stable and thriving source of revenue. One idea that has been floating recently in council is to form an advisory board that would include past presidents and use this board to work on long term plans. There are 15 past presidents registered in this year's conference, so I think it should not be difficult to count on a couple of them from time to time to lend a hand and make use of their rich experience.


As you may have noticed from the treasurer's report, the main sources of revenue for the society are membership dues and conference profits. In the last few years I believe we were having healthy profits from most of the conferences, but more can be done, such as streamlining the planning and management of the conferences and making use of the cumulative expertise that accumulates with the different program committees. Ideally the conference should be handled by professional planners, but given our financial situation we are still far from there. In the short term I will work this year with Corinne MacDonald and Kenneth Klassen on a conference manual. As part of this initiative, we hope to institute having special journal issues and securing sponsorship for the conference.

Looking at the costs side, we find that our major costs are administrative services and the journal INFOR. I believe in the past few years the society had trimmed costs on several fronts, such as the Bulletin, which is mostly published online, and council meetings, where we now have one face-to-face meeting and use Skype teleconference for the remaining meetings. However, the INFOR expenses kept constant and sometimes increasing despite the fact that it had recently moved to online publishing. So I see that as a potential source of cost savings. In my opinion we should at least have some arrangement where we breakeven with the journal, but even better in the long run it should be generating profits. But, this is not a simple task and I plan to continue with the efforts that have been put in place last year where a committee headed by the editor of INFOR is looking at possibilities for improving the situation.

I hope the constitution changes will be approved and the society will as a consequence have online voting, which should make the vote collection and counting much more convenient and less costly.

Another initiative that we will continue working on is web hosting and maintenance where we hope to have a more flexible and stable arrangement for the society's web presence so we can electronically process services such as membership subscriptions, conference registrations and hosting, credit card payments and voting.

To conclude, I offer my sincere thanks to all of you for your support of CORS. I look forward to seeing you next year in Vancouver.



Elkafi Hassini

CORS 2012 Award Winners

Congratulations to the following winners of the awards and prizes presented at the 2012 CORS Annual Conference in Niagara Falls, ON. Special thanks to all the participants and also to the judges of the Student Paper Competition. In particular, CORS thanks Fatma Gzara of the University of Waterloo for her support and dedication in chairing the Student Paper Competition (Open Category). More details on all CORS Awards and prizes, including a complete list of past winners, can be found by visiting the CORS website (www.cors.ca).

Prize	Recipients
Harold Larnder Memorial Award	George Nemhauser , Russell Chandler III Chair and Institute Professor, H. Milton Stewart School of Industrial and Systems Engineering, Georgia Institute of Technology
Omond Solandt Award	Navtech, Inc.
The CORS Award of Merit	Oded Berman , Sydney C. Cooper Chair in Business and Technology, Joseph L. Rotman School of Management, University of Toronto
The CORS Service Award	Taraneh Sowlati , Associate Professor, Department of Wood Science, University of British Columbia
The CORS Practice Prize	<u>First Prize</u> Peter Vanberkel, Richard J. Boucherie, Erwin W. Hans, Johann L. Hurink, Wineke A. M. van Lent, Wim H. van Harten , Department of Industrial Engineering, Dalhousie University, <i>"Implementing algorithms to reduce ward occupancy fluctuation through advanced planning"</i> <u>Honourable Mention</u> Derek Atkins, Vanessa Noonan, Marcel Dvorak, Argelio Santos, Rachel Lewis, James Gurling, Liping Liang, Andy Chen , Centre for Operations Excellence, Sauder School of Business, University of British Columbia, <i>"Traumatic Spinal Cord Injuries: Modeling the Care Journey from Accident to Post-Discharge"</i>
Student Paper Competition	<u>Open Category: First Prize</u> Michael Kim , University of Toronto, "Joint Optimization of Sampling and Control of Partially Observable Failing Systems" <u>Open Category: Honourable Mention</u> Velibor Misic , University of Toronto, "Adaptive and robust radiation therapy optimization for lung cancer" <u>Undergraduate Category: First Prize</u> Issac He, Mark Strange, Hans Aisake , Simon Fraser University, "The TA assignment problem with open tutorials" <u>Undergraduate Category: Honourable Mention</u> Sam Maggs, Michelle Leung, Svyatoslav Glazyrin , Simon Fraser University, "Intersection Optimization Analysis: Cambie & W. Broadway, Vancouver"
Outstanding Administrative Award	Wendy Caron

2012 CORS Award of Merit Winner: Oded Berman



Armann Ingolfsson (left) presents the 2012 CORS Award of Merit to Oded Berman

Several people wrote letters of support of the nomination of Professor Oded Berman, the Sydney Cooper Chair in Business and Technology at the Joseph L. Rotman School of Management at the University of Toronto, to receive the 2012 CORS Award of Merit. They commented that Prof. Berman has served as an area editor and associate editor of *Operations Research*, an associate editor of *Management Science*, and an associate editor of *Transportation Science*, and that he has published over 200 peer-reviewed articles, including foundational papers in the fields of stochastic facility location, flow interception, and front room / back room workforce allocation. One of his contributions to practice was to participate in a project for the US Postal Service, which “focused on scheduling of workers and workflows, was the basis for changing the ratio of full time and part time workers, a decision that is currently saving the US Postal Service hundreds of millions of dollars per year,” to quote one of the letters of support. In addition to his current appointment at the University of Toronto, Prof. Berman has been a faculty member and an area or department chair at the University of Calgary and the University of Massachusetts at Boston.

Vedat Verter, who nominated Prof. Berman, writes:

I would like to highlight Professor Berman's contributions to the supervision of highly qualified people. Throughout his career he supervised (or co-supervised) 16 PhD students and 14 post-doctoral fellows, many of whom are pursuing successful academic careers. Arguably, the most prolific researcher trained by Professor Berman is Professor David Simchi-Levi, whose accomplishments need no explanation. I also recall a presentation in an ISOLDE meeting, where the authors used a location model to identify the researcher who had the highest number of distinct collaborators; and they identified Professor Berman as the most collaborative researcher in location science.

Prof. Berman's colleague Dmitry Krass writes in a similar vein:

It is often said in sports that a measure of a truly great player is not just his personal achievements, but that he makes players around him better as well. By this criterion Oded has richly succeeded. The list of people who have benefitted from working with Oded is long and includes such luminaries as Ed Kaplan, David Simchi-Levi, Richard Larson, Zvi Drezner, Stanley Gershwin, and many others (I have, of course, been the luckiest, with the unfair advantage of having an office next door for the last 20 years).

Beth Jewkes credits Prof. Berman with a life-changing decision to complete a PhD and to pursue research. Sapna Isotupa, whom Prof. Berman supervised as a postdoctoral fellow, comments that he always made time for his students and that he spends a great deal of time talking to students from outside North America about the research culture and the academic environment.

Richard Larson comments:

It has been my privilege and pleasure to have served as co-author with him on some of his many papers. Working with him is a joyous, mind-bending and productive experience. Invariably he has a way of combining often disparate ideas and approaches from the various tribal segments of OR to create a new model or algorithm that fits the need for the problem being addressed. And the tying together of usually separate lines of research is not easy, but Oded does it: in location theory, supply chains, workforce management and so much more.

Ed Kaplan concludes a letter supporting the nomination of Prof. Berman with:

Oded has given so much to our profession that he clearly deserves to be recognized for his efforts and accomplishments in research, practice, management, education and service. I therefore *and with great enthusiasm* add my support to your nomination of Oded Berman for the CORS Award of Merit.

In closing, here is a quote from Dmitry Krass' letter:

I believe that we, in the Canadian Operations Research community, should be very proud to count Oded Berman among us. He is richly deserving of the CORS Award of Merit.

Armann Ingolfsson

2012 Omond Solandt Award



Samir Elhedhli (left) presenting the Omond Solandt Award to Robert Gerbracht, Mike Yeo, and Robert Mora

The 2012 CORS Omond Solandt Award for excellence in operational research was presented to Navtech, a leading international provider of flight operations software for the commercial aviation industry with head offices located in Waterloo, Ontario. The award was granted in recognition of a joint-venture project with the University of Waterloo to apply mathematical and modeling techniques to compare crew pairings solutions. CORS Past President Samir Elhedhli oversaw three graduate students in management science who worked as research interns with Navtech and partner Dr. Robert Gerbracht on the project. Vice President of Technology Mike Yeo, along with Dr. Gerbracht and Crew Product Director Robert Mora, accepted the Solandt award.

The Omond Solandt Award is awarded to an organization, private or governmental, that is deemed to have made an outstanding contribution to operational research in Canada. Dr. Solandt was the first president of CORS and the founder and first chairman of the Defence Research Board. At various times in his life he headed the Science Council of Canada, was a vice-chairman of Canadian National Railways (CNR), and was Chancellor of the University of Toronto. A complete biography of Omond Solandt may be found in the Library on the CORS website.

2012 CORS Service Award Winner

Taraneh Sowlati was the recipient of the 2012 CORS Service Award, presented at the CORS Annual Conference in Niagara Falls, Ontario. Dr. Sowlati is an Associate Professor in the Department of Wood Science, Faculty of Forestry, University of British Columbia and has been a full member of CORS since February 2002. She was a CORS Council Member from March 2008 to May 2010 and has served as CORS Membership Committee Chair from March 2008 to the present, including helping in the major task of conducting the 2010 membership report. She has also been CORS Vancouver Chapter President from May 2006 to the present and is the Chair of the CORS 2013 Annual Conference Organizing Committee.



Taraneh Sowlati

2012 CORS Student Paper Competition Winners

Open Category

The CORS Student Paper Competition was very popular again this year. In the Open Category, 13 submissions were received. Based on feedback from nine judges, four finalists were selected to present their work at the CORS Annual Conference. A first prize and an honourable mention were awarded.

Chair of the Open Category Committee: Fatma Gzara, University of Waterloo

Judges:

Mehmet Begen, University of Western Ontario
Louis-Martin Rousseau, Polytechnique Montréal
Osman Ozaltin, University of Waterloo
Sapna Isotupa, Laurier University
Baris Balgioglu, University of Toronto
Joe Naoum-Sawaya, American University of Beirut
Safa Erenay, University of Waterloo
Beste Kucukyazici, McGill University
Qiming He, University of Waterloo

The First Prize in the Open Category was awarded to Michael Jong Kim, University of Toronto, for the paper "Joint Optimization of Sampling and Control of Partially Observable Failing Systems" (co-author: Viliam Makis, University of Toronto).

Stochastic control problems that arise in reliability and maintenance optimization typically assume that information used for decision-making is obtained according to a pre-determined sampling schedule. In many real applications however, there is a high sampling cost associated with collecting such data. It is therefore of equal importance to determine when information should be collected as it is to decide how this information should be utilized for maintenance decision-making. This type of joint optimization has been a long-standing problem in the operations research and maintenance optimization literature, and very few results regarding the

structure of the optimal sampling and maintenance policy have been published. In this paper, we formulate and analyze the joint optimization of sampling and maintenance decision-making in the partially observable Markov decision process framework. We prove the optimality of a policy that is characterized by three critical thresholds, which have practical interpretation and give new insight into the value of condition-based maintenance programs in life-cycle asset management. Illustrative numerical comparisons are provided which show substantial cost savings over existing suboptimal policies.



Fredrik Odegaard (left) presenting the Open Competition First Prize to Michael Jong Kim

The honourable mention was awarded to Velibor Mistic, University of Toronto, for the paper "Adaptive and robust radiation therapy optimization for lung cancer" (co-author: Timothy Chan, University of Toronto).

A previous approach to robust intensity-modulated radiation therapy (IMRT) treatment planning for moving tumors in the lung involves solving a single planning problem before the start of treatment and using the resulting solution in all of the subsequent treatment sessions. In this paper, we develop an adaptive robust optimization approach to IMRT treatment planning for lung cancer, where information gathered in prior treatment sessions is used to update the uncertainty set and guide the reoptimization of the treatment for the next session. Such an approach allows for the estimate of the uncertain effect to improve as the treatment goes on.

Our method is computationally tractable, as it involves solving a sequence of linear optimization problems. We present computational results for a lung cancer patient case and show that using our adaptive robust method, it is possible to attain a significant improvement over the traditional robust approach in both tumor coverage and organ sparing simultaneously. We also prove that under certain conditions our adaptive robust method is asymptotically optimal, which provides insight into the performance observed in our computational study.



Fredrik Odegaard (left) with Open Competition Honourable Mention winner Velibor Misic

Undergraduate Category

In the undergraduate competition, 11 entries were received and one first prize was awarded, along with an honourable mention.

Chair of the Undergraduate Category Committee: Anjali Awasthi, Concordia University

Judges:

Satyaveer Chauhan, Concordia University
Ivan Contreras, Concordia University
Prof. Xiao Huang, Concordia University
Prof. Yan Feng, Dalhousie University
Pascal Forget, Université du Québec à Trois-Rivières

Raf Jans, HEC, Université de Montréal
Masoumeh Kazemi, Concordia University
Simon Li, Concordia University
Rajesh Tyagi, HEC, Université de Montréal
Navneet Vidyarthi, Concordia University

The First Prize in the Undergraduate Category was awarded to Issac He, Mark Strange, and Hans Aisake, Simon Fraser University, for the paper "The TA assignment problem with open tutorials."

We consider the problem of scheduling teaching assistants (TAs) to an open tutorial lab. Open tutorials provide an integrated framework of tutorials for multiple courses. Hence, assignment of teaching assistants raises several optimization challenges. We formulate the TA assignment problem as a minimum-cost network flow model with additional restrictions to distribute the tutorial workload among several TAs. Factors such as TA availability, course schedules, and expected student turnout are taken into account. The model takes advantage of certain jobs that do not require specific time scheduling. The output of the model yields a solution that can reach the most students possible. Furthermore, since these are generally small problems, solutions can be found in a timely manner using a general purpose integer programming solver.



Fredrik Odegaard (left) presenting the Undergraduate Competition First Prize to Hans Aisake and Mark Strange

An Honourable Mention was awarded to Sam Maggs, Michelle Leung, and Svyatoslav Glazyrin, Simon Fraser University, for the paper “Intersection optimization analysis: Cambie & W. Broadway, Vancouver.”

The cross streets of W. Broadway and Cambie is one of the busiest intersections in the Vancouver Metropolitan area. Introducing a new traffic pattern, such as a diagonal crossing (“scramble crossing”), to improve pedestrian crossing efficiency can be “risky” considering the high traffic volume that the traffic corridor supports. The benefits from introducing a scramble crossing include the obvious shorter distance travelled by pedestrians when wanting to reach an opposite diagonal corner, and, given the right type of scramble crossing, a reduction of vehicle delays that are produced by walking pedestrians. Based on research and review of previous studies and methods, we constructed a mixed integer programming model to establish if the introduction of a scramble crossing at the chosen intersection would improve efficiency. Applying our model to the intersection of study generated positive results, allowing us to recommend that a scramble intersection be introduced based on our data.



Fredrik Odegaard (left) with Undergraduate Competition Honourable Mention winners Svyatoslav Glazyrin, Sam Maggs, and Michelle Leung

2012 CORS Practice Prize Winners

The CORS practice prize recognizes the outstanding application of operational research that has had a significant, verifiable and quantifiable impact on the performance of the client organization. Four finalists presented their projects at the 2012 CORS Annual Conference in Niagara Falls. The judging team of Mike Carter (University of Toronto), Armann Ingolfsson (University of Alberta) and Rick Caron (University of Windsor) came to unanimous agreement that the 2012 Practice Prize be awarded to the project ***“Implementing algorithms to reduce ward occupancy fluctuation through advanced planning”***, presented by Peter Vanberkel (Dalhousie University) on behalf of co-authors Richard J. Boucherie, Erwin W. Hans, Johann L. Hurink, Wineke A. M. van Lent, and Wim H. van Harten.



Peter Vanberkel (left) accepts the CORS Practice Prize from Richard Caron.

The project provided a model that led to a redesign of the master surgical schedule at the Netherlands Cancer Institute – Antoni van Leeuwenhoek Hospital that, through better use of ward capacity, allowed an additional operating room to be built without ward expansion. The authors partnered with Information Builders Co. and developed a commercial version currently being offered to Dutch hospitals and marketed worldwide.

Honourable Mention was awarded to the project **“Traumatic Spinal Cord Injuries: Modeling the Care Journey from Accident to Post-Discharge”** which was presented by Derek Atkins (Sauder School, UBC) on behalf of co-authors Vanessa Noonan, Marcel Dvorak, Argelio Santos, Rachel Lewis, James Gurling, Liping Liang, and Andy Chen.

Richard J. Caron

Wendy Caron Presented with CORS Outstanding Administrative Award

A special Outstanding Administrative Award was presented to Wendy Caron, outgoing CORS Membership Services provider, at the 2012 CORS Annual Conference. Wendy started her service to CORS at the 1999 Annual Conference, held in Windsor, Ontario. As conference manager she took care of all details and ensured that all attendees were greeted with a warm smile and a “Bounty from the County” goodies bag. Past President John Blake said that his earliest recollection of Wendy is from that conference and that he “clearly recalls her wonderful organizational skills”. When CORS looked for its first professional manager, her demonstrated commitment to service made Wendy the obvious choice. She held the position from 2003 to 2011. Wendy also helped with the 2012 conference registration as her final contribution to CORS.



Samir Elhedhli presents Wendy Caron with the Outstanding Administrative Award and a package of thank-you letters from past presidents of CORS.

Past President Evelyn Richards said that “Wendy did more than capably provide membership services; she redefined what it should be. She quickly moved on from executing routine membership database functions to producing the Bulletin, providing conference services, designing the new website, and many other cost-saving and value-adding functions”. The difference that Wendy made to the Society was immediately noticeable. For example, the turnaround time for responses to membership applications, payment of dues, etc., changed from months to days, and very often, minutes. She produced substantial membership reports to the CORS Council that included trend analyses and recommendations. She had a significant impact on the CORS website, the Bulletin, the INFOR journal and CORS conferences. Furthermore, Wendy very likely knows the names and workplaces of all CORS members. A member that re-joined after several years of a lapsed membership received a message from her saying “welcome back”. He said the message made him feel “valued,” and he has since maintained his membership. Wendy cared deeply about the Society and, as Past President Steve Drekic noted, “she took immense pride in the Society as a whole”. Past President Armann Ingolfsson perhaps sums it up best: “Hiring Wendy to provide membership services was among the best decisions that CORS has ever made. I wish her a happy and productive retirement from CORS – but I hope we will continue to see her occasionally at CORS conferences.”

2012-2013 CORS Budget

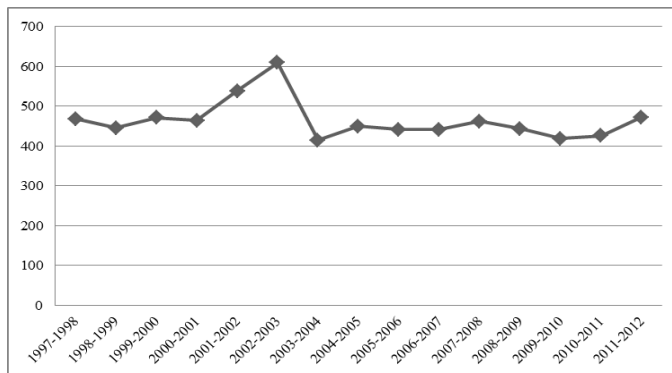
	2011-12 Budget	2011-12 Actual	2012-13 Budget
I. Receipts			
Membership Dues	35,000.00	27,670.00	35,000.00
Conference Profit	5,000.00	17,091.44	20,000.00
SSHRC Conference Grant	7,125.00	7,125.00	7,125.00
INFOR Royalty/Profit	1,000.00	218.12	750.00
Miscellaneous	120.00	0.00	0.00
Total Receipts	\$48,245.00	\$52,104.56	\$62,875.00
II. Expenses			
Administrative Expenses	17,000.00	15,438.08	17,000.00
Bulletin	2500.00	2,915.21	2,500.00
SSHRC Conference Grant	7,125.00	7,125.00	7,125.00
Council Meeting	7,000.00	2,196.54	4,500.00
Sections Shares of Dues	3,500.00	3,192.99	3,500.00
Sections Shares of Conference Profit	1,000.00	2,104.57	2,250.00
INFOR Journal	8,000.00	15,717.82	14,500.00
IFORS Subscription	450.00	397.25	450.00
Awards	3,000.00	1,169.31	3,000.00
Graduate Student (non-CORS) Conference Support	2,000.00	1,500.00	2,000.00
Travelling Speaker Program/CORS Events	2,000.00	851.61	2,000.00
Teaching Effectiveness Colloquium Faculty Support	1,000.00	0.00	1,000.00
GST/HST	2,000.00	-	2,000.00
Bank and Credit Card Charges	1,000.00	3,472.30	1,000.00
Web Services			10,000.00
Total Expenses	\$57,575.00	\$56,080.68	\$72,825.00
Expected Profit/Loss	(\$9,330.00)	(\$3,976.12)	(\$9,950.00)
III. Balances			
Opening Balance (as of April 1)	\$93,735.34	\$93,735.34	\$149,886.02
Adjustments:			
Expected Receipts During 2011/2012	\$48,245.00		
Expected Expenses During 2011/2012	(\$57,575.00)		
Expected Receipts During 2012/2013			\$62,875.00
Expected Expenses During 2012/2013			(\$72,825.00)
Expenses: Conference 2011 (St. John's)	(\$1,162.04)		
Receipts: Conference 2012 (Niagara Falls) Registration	\$2,518.84	\$63,395.00	
Expenses: Conference 2012 (Niagara Falls)		(\$3,268.20)	(\$60,126.80)
Cheques issued but not on 2010/2011 bank statements	(\$17,130.51)		
Cheques received but not on 2010/2011 bank statements	\$1,247.00		
Closing Balance (March 31)	\$72,202.71	\$149,886.02	\$79,809.22

2011–2012 Membership Report

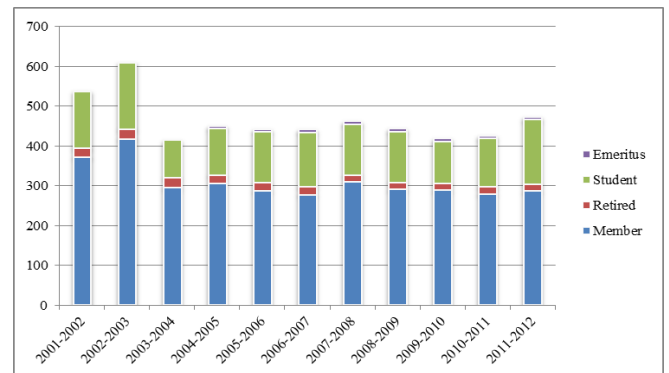
I am pleased to submit for the consideration of CORS Council a copy of the 2011–2012 Annual Membership Report for the Canadian Operational Research Society which documents the membership activity experienced by the Society over the past year. The report provides Council with the information it needs to assess the health and well-being of the Society; to monitor the effectiveness of membership processes and practices; and to identify areas where policy initiatives or changes may be required. This report reveals that CORS experienced a modest increase in membership in 2011–2012. There are also indications that members are retaining their memberships longer than previously. I encourage CORS Council to continue to act upon the Future Directions set out in report on the 2010 Membership Survey Results. These graphs summarize the report, which can be seen in full on the CORS website.

Erla Anderson

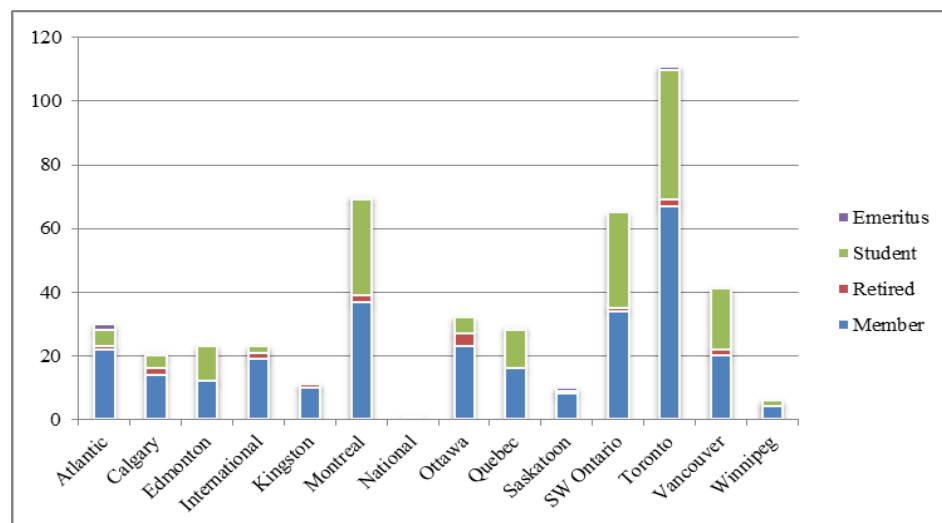
CORS Membership (Total Number) 1998–2012



CORS Membership by Member Type 2002–2012



CORS Membership by Section and Member Type March 31, 2012





55th CORS Annual Conference
May 27–29, 2013
Hyatt Regency Hotel, Downtown Vancouver
www.cors.ca/CORS2013

On behalf of the 2013 CORS Conference organizing committee, it is my pleasure to invite you to join us in beautiful Vancouver for next year's annual meeting during May 27–29, 2013.

Consistently ranked as one of the most liveable cities in the world during the past decade, Vancouver offers visitors outstanding opportunities for outdoor adventure as well as the urban amenities of a world-class city.

Renowned for its scenic beauty, Vancouver has always been a favored destination for sophisticated travelers, as well as a top choice for family vacations. Surrounded by spectacular mountains, oceans and parks in Vancouver, you and your family will have limitless options for activities in and around the city, such as biking around Stanley Park, hiking one of the local mountain trails, visiting some of the museums, galleries, and theaters, shopping, and enjoying the international cuisine in world-class restaurants. Also, you can relive memories of the Vancouver 2010 Winter Olympic Games with attractions and activities related to the Olympics.

The conference venue will be the Hyatt Regency Hotel in downtown Vancouver. Offering exceptional and stylish meeting spaces and facilities, Hyatt Regency is located in the heart of downtown, only moments away from shops, restaurants, and entertainment.

Vancouver is an international transportation hub, and it is easy to travel to and from this beautiful city. The Vancouver transit system (TransLink) includes a large network of buses, SeaBus and SkyTrain system, so getting around the city is convenient and affordable. The Canada Line (part of the SkyTrain rapid transit system) provides a direct link between Vancouver International Airport (YVR) and downtown Vancouver. You can take the Canada Line from YVR and arrive in downtown Vancouver in less than 30 minutes.

The organizing committee has plans to arrange an exciting conference with a strong scientific program that includes stimulating plenary sessions and tutorials. All additional details will be published in the near future on the conference website and communicated to the members through our Listserv. Please feel free to contact me at taraneh.sowlati@ubc.ca if you are interested in organizing a cluster or session, or submitting a paper.

For more information, including registration, fees, accommodation and abstract submission, please check our website: www.cors.ca/cors2013.

Taraneh Sowlati
Conference Chair



Announcements

CORS Constitution Updates Approved by Membership

The work of updating our CORS Constitution and By-Laws began in 2008, and this year Council formed a Constitution Committee to complete this work. Council also acquired the legal services of Baker & McKenzie LLP of Toronto to assist with this process. Our constitution and By-Laws had not been updated since 1997, and so changes were necessary to reflect current practices and operation of Council and the Society. In addition, the updated Constitution and By-Laws contain changes that will allow the Society to take advantage of new technology such as electronic voting to save costs. The changes were presented at the AGM on June 12, 2012 in Niagara Falls for discussion. A mail ballot was sent out after the AGM. The results of the vote on the constitution changes were as follows:

Yes: 86/88 (98%)

No: 1/88 (1%)

Blank: 1/88 (1%)

The constitution updates accepted by the membership are effective immediately. The updated CORS Constitution and By-Laws can be found at <http://www.cors.ca/en/library>. Also on the website is a document summarizing major changes to the By-Laws and reasons for the changes.

CORS Special Interest Groups

CORS Council recently 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 Queueing Theory SIG: contact Doug Down (downd@univmail.cis.mcmaster.ca, McMaster University, Department of Computing and Software).
- CORS Health Care SIG: contact John Blake (john.blake@dal.ca, Dalhousie University, Department of Industrial Engineering).

If you would like to join a SIG, contact the persons listed above, or simply 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 <http://www.cors.ca/en/membership/index.php>.

Discussions are underway about forming SIGs in several additional areas. If you are interested in forming a SIG in a particular area, then feel free to contact the CORS SIG Committee: Elkafi Hassini (hassini@mcmaster.ca), Armann Ingolfsson (Armann.ingolfsson@ualberta.ca), and Douglas Woolford (dwoolford@wlu.ca).

CORS Members Making Waves

Michael Armstrong, Associate Professor in the Department of Finance, Operations, and Information Systems at Brock University, was recently chosen as the 2012 winner of the Faculty of Business Excellence in Teaching award and as one of the three 2012 winners of the university's 2012 Chancellor's Chair for Teaching Excellence awards.

It's time to renew your CORS Membership

Don't forget to renew your CORS Membership.

Go to <http://www.cors.ca> to renew online using your VISA® or MasterCard® credit card

OR

Mail your credit card information or a cheque payable to the Canadian Operational Research Society to Erla Anderson, CORS Membership Services, 1004 112 Street NW, Edmonton, AB T6J 6S8. Payments by mail will also be received if sent to CORS-SCRO, Box/C.P. 2225, Station D, Ottawa, ON K1P 5W4. If you do not wish to continue as a member of the Society, please contact Erla Anderson at erla@shaw.ca.

CORS Sections News

Edmonton

The CORS Edmonton Section was more active during 2011/12 than it has been for a long time, with two interesting dinner speakers – journalist David Staples, who discussed hockey analytics and Perry Kinkaide, who discussed an analytics conference that was held in Edmonton last April. The Section executive looks forward to building on last year's momentum with new events in the fall. Early in the fall, we plan to survey section members about what types of events they are most interested in. One idea that we have discussed is organizing bring-your-own-lunch events at a downtown Edmonton location, with several people giving brief presentations instead of having one long presentation. The idea is to provide an informal forum where section members can discuss OR or analytics-related challenges that they are facing, or to celebrate OR-related accomplishments, without having to prepare a full-fledged presentation. We plan to organize at least one such event in the fall. If you would like to be on the Section's distribution list then please contact the Section President, Armann Ingolfsson (armann.ingolfsson@ualberta.ca).

Montreal

Montreal's section had two CORS talks during its annual Optimization Days event (May 7–9), which gathered more than 300 participants and 200 presentations. The CORS talks were a plenary session with Sophie D'Amours (Université Laval) and a tutorial by Dionne Aleman (University of Toronto).

Saskatoon

In the last year, the Saskatoon Section had two very interesting talks. On November 17, 2011, Sherry Weaver, University of Calgary, gave a talk about joint replacement, under the title: "Can a Joint Replacement be like a trip to Disneyland". On March 27, 2012, Luanne Sirota, City of Saskatoon, talked about the schedule to fix sidewalks. Poor sidewalks can lead to falls and injuries.

Waterloo Student

On February 28, the CORS Waterloo Student Chapter went on a tour of the Toyota Motor Manufacturing Canada Plant in Cambridge, ON.

Vancouver

Planning session for CORS 2013 Annual Conference: The CORS 2013 organizing committee, including the CORS Vancouver Chapter board members plus volunteers from the Industrial Engineering Research Group at UBC, attended a planning session on April 25. During this meeting the following items were discussed: Venue and food selection, Website setup, Program and schedule, Promotional material, and Sponsors. In order to facilitate the communication among the organizing committee members a Google Group was set up after the meeting. Those CORS members in BC who are interested in helping us out and attending our future planning sessions, please contact Taraneh Sowlati at taraneh.sowlati@ubc.ca.

George Lindsey: A Canadian Leader in Operational Research¹

by Eldon Gunn

Dr. George Lindsey's passing on September 6, 2011 brought to an end a life that included an immense contribution to operational research, both in Canada and internationally. Lindsey was part of the group that Omond Solandt called together for the meeting in February, 1959 that led to the founding of the Canadian Operational Research Society in the following year (Sandiford, 1963) He served as CORS President in 1961-62, although his term was interrupted by his transfer to Italy as part of the Joint Chiefs of Staff. Lindsey was the second winner of the CORS Award of Merit (1984), and in 1989 he was presented with the Order of Canada.

George Lindsey graduated from the University of Toronto in Math and Physics in 1942. His involvement in operational research began almost immediately after that; his remarks on the occasion of receiving the George Bell Award (2009) provide a quick summary:

"After enlisting for active service in the Royal Canadian Artillery in early 1942, I was delighted to be given a very well-organized training in radar, especially designed for defence against aircraft. This was followed by attachments to the National Research Council, the British Army Operational Research Group and the Canadian Army Research Group. Most of the duties were related to ground-based defence against aircraft, employing studies of both exercises and actual military operations against enemy aircraft. Combined with similar research by other organizations of the army, navy and air force against enemy air, land and sea forces, this type of analysis became known as operational research and gradually extended to many other activities. The general elements were using mathematical and other scientific methods to measure the effectiveness of what was being done, and calculate how the methods could be improved."

Following the war, Lindsey completed an MA at Physics at Queens University and a PhD in Nuclear Physics at Cambridge as a member of the Cavendish Laboratory. Prominent in the Cavendish Laboratory was P.M.S. Blackett, who was famous for the Nobel Prize in Physics but who during the war had led Blackett's Circus, one of the OR groups working on the use of radar. At Cambridge, Lindsey was a prominent member of the Nuclear Nitwits Club, a group of Commonwealth graduate students known for their lack of reverence to the intellectual hierarchy. Besides Lindsey, the group included Alan Cormack (Nobel laureate for development of the CAT scan), Joan Freeman and Godfrey Stafford, all of whom went on to outstanding careers.

In 1950, Lindsey was reunited with Omond Solandt, who had been his boss in the British Army Operational Research Group, when he joined the Defence Research Board's Operational Research Group. Over the next 17 years he held a variety of increasingly senior positions, including Chief of the Operational Research Group at the Anti-Submarine Warfare Research Centre of the Supreme Allied Commander, Atlantic (NATO) in La Spezia, Italy (1961-1964). In 1967 he became Chief, Operational Research and Analysis Establishment (CORAE), a position

¹ This is a revised version of a talk given by Eldon Gunn at the banquet of the 2012 CORS Annual Conference held June 10–13 in Niagara Falls, Ontario. The talk and this note have borrowed heavily from Sandra Martin's article in the *Globe and Mail* and I.M.R. McKenna's introduction to the Finding Guide for the Lindsey Fonds.

he held (with slightly different titles through various Department reorganizations) until his retirement in 1987. As far as I can tell, all of George Lindsey's jobs from 1950 until 1987 had the words "operational research" somewhere in the title.

Dr. Lindsey has been recognized as one of the world's foremost defence analysts. The citation from his Order of Canada (1989) summary reads:

"Long-time Chief of the Operational Research and Analysis Establishment with the Department of National Defence, he has a world-wide reputation as an authority on deterrence policy, arms control, nuclear weapons policy, naval warfare and strategic analysis. Due to the highly sensitive nature of his work he may not be well-known to the general public but he has published extensively and is a sought-after speaker among defence scientists both in Canada and in NATO."

Lindsey was a prolific author, lecturer and advisor. The finding guide to the archive fonds prepared by McKenna (1997) run to some 60+ pages of documents. The article by Friesen (2008) gives a sense of some of his thoughts and work. His books include *The Dynamics of the Nuclear Balance* (co-authored with Albert Legault, 1976) and the more recent *Strategic Stability of the Arctic* (1989). In 2003, he was called to testify to the Parliamentary Standing Committee on National Defence during a study of Canada-United States defence cooperation. It is worth noting that he had retired some sixteen years earlier.

Not all of George Lindsey's operational research publications were about defence strategy. He was a good athlete as a young man and had a strong interest in sports. He published two articles in the flagship journal *Operations Research* on statistics and strategy in baseball (Lindsey 1959, 1963).

George Lindsey remained close to CORS throughout his career. When I first started attending CORS conferences in the 1970s through to the 1980s, George Lindsey was inevitably there, usually as a featured speaker. He was one of the founders of our Society and an inspiration to many of us. I hope that these notes encourage members to learn more about George Lindsey, as CORS owes much to him.

References:

1. Friesen, S. K. (2008). "Note To File—Reaching Into The Oracle: Reflections Of A Cold Warrior On The Issues And Challenges In Defence," *Canadian Army Journal* Vol. 11.1, Spring 2008, pp. 113-120.
2. Lindsey, G. (2009). "Operational Research: Remarks by George R. Lindsey at The Second Annual CIC George G. Bell Strategic Leadership Award Dinner." Ottawa, November 1, 2009. Last accessed online August 1, 2012 at <http://www.cdfai.org/sswgprojects.htm>.
3. Lindsey, G. (1959). "Statistical Data Useful for the Operation of a Baseball Team," *Operations Research*, 7, 197-207.
4. Lindsey, G. (1963). "An Investigation of Strategies in Baseball," *Operations Research*, 11, 447-501.
5. Martin, S. 2011. "Nuclear Physicist George Lindsey was DND's Best Mind," *Globe and Mail*, Sept 25, 2011.
6. McKenna, I.M.R. 1997. "Finding Aid to the George Lindsey Fonds (87/253)." Prepared January 1997 by I.M.R McKenna, Revised 14 March 2005 by Warren Sinclair. Laurier Centre for Military, Strategic and Disarmament Studies, Wilfred Laurier University. Last accessed online August 1, 2012 at www.wlu.ca/lcmsds/archives/search/dhh/80-89/87/87-253.doc
7. Parliament of Canada, 37th PARLIAMENT, 2nd SESSION Standing Committee on National Defence and Veterans Affairs EVIDENCE CONTENTS Tuesday, May 13, 2003. Last accessed online August 1, 2012 at <http://www.parl.gc.ca/HousePublications/Publication.aspx?DocId=902064&Language=E&Mode=1&Parl=37&Ses=2>
8. Sandiford, P.J. 1963. "The Origin and Growth of the Canadian Operational Research Society," *CORS Journal*, 1(1): 1-12.



2nd Lieutenant George Lindsey, Royal Canadian Artillery, 1942.

Last accessed online August 14, 2012 at <http://www.wlu.ca/cmsds/cmh/backissues/CMH/volume4/Issue2/Lindsey-SomePersonalRecollectionsofArmyOperationalResearchonRadarinWorldWarII.pdf>

CanQueue 2012: “Bringing Queue Models to Life”

Organizing Committee:

Prof. David A. Stanford
Dept. of Statistical and Actuarial Sciences
The University of Western Ontario
1151 Richmond Street
London, ON N6A 3K7
Tel: (519) 661-3612
E-mail: stanford@stats.uwo.ca

Dr. Douglas G. Woolford
Dept. of Mathematics
Wilfrid Laurier University
75 University Ave. W.
Waterloo, ON N2L 3C5
Tel: (519) 884-1970 Ext. 2296
E-mail: dwoolford@wlu.ca

Dates and Location:

September 4–5, 2012
University of Western Ontario (Western University), London, Ontario, Canada

Executive Summary:

The objectives of the CanQueue workshops, held annually since 1999, are to promote research and application of queueing theory among practitioners predominantly drawn from Canada. The workshops emphasize discussion of research work in progress, to facilitate feedback from colleagues and collaboration while the direction of the project can still be influenced.

Other objectives include:

1. provide a venue for graduate students to present their work (in progress, or completed) in a supportive environment,
2. provide adequate focus on emerging application areas for congestion analysis,
3. encourage collaboration among researchers in queueing theory in Canada, and
4. introduce relevant and emerging fields of mathematics to the queueing community.

In the light of the 2nd point above, we observe that recently, there has been a surge in research activity and interest related to queueing applications in healthcare. The interest is sparked in part by the sheer size of the health care sector; a 2011 Canadian Institute for Health Information (CIHI) report indicated that in 2010, nearly \$200 billion was spent on health care in Canada. The research activity includes, among others, queueing models for transplant wait times, the scheduling and routing of ambulances, the impact of flexibility in customer/patient choice on semi-pooled system wait times, and queueing system models for ambulance offload delays. This research has garnered the attention of not only academic researchers in this area, but also the medical community, policy makers and politicians who are looking for quantitative decision support tools. To reflect and promote this exploding area of research, queueing for healthcare will be the main focus of the workshop, as indicated by its title above, and the targeting of an entire day to this theme.

Confirmed Program:

This year's workshop includes keynote presentations by the following academics, who have agreed to speak on the following themes:

- 1) Prof. Michael Carter, Centre For Research in Healthcare Engineering, U. of Toronto, on key aspects queueing theorists need to consider when modelling health care systems;
- 2) Prof. Douglas Down, McMaster University, on the impact of patient choice on wait times in semi-pooled systems;
- 3) Prof. Armann Ingolfsson, U. Of Alberta, on EMS vehicle deployment and off-load delays.

As a counterpoint to these talks by academics, we have the following four keynotes from specialists on the performance of the health care system at a national or provincial level:

- A) Dr. Chris Simpson, Chair, Wait Times Alliance (comprising the Canadian Medical Association and medical specialist national associations' interest in wait times);
- B) Mr. John Abbott, CEO, Health Council of Canada;
- C) Mr. Neil McEvoy, Director of the Centre for Research in Healthcare Engineering, and former CEO of Hotel Dieu Hospital, Windsor, and of Providence Healthcare, Toronto;
- D) Mr. Shawn Thomas, Director, Diagnostic Imaging Program, Eastern Health, Newfoundland & Labrador.

As the challenges posed by congestion in health care extend beyond Canada's borders, international experts from the have been invited to participate, as will a variety of Canadian health care professionals.

CanQueue Schedule:**Tuesday, September 4, 2012**

Noon–12:25	Registration and On-site Lunch
12:25–12:30	CanQueue 2012 opening remarks
12:30–14:00	General session I (4 talks)
14:00–14:20	Coffee break
14:20–15:50	General session II (4 talks)
15:50–16:10	Short break
16:10–17:40	General session III (4 talks)
18:30–20:30	Banquet and Keynote Address

Wednesday, September 5, 2012

08:00–08:30	Continental Breakfast On-site
08:30–10:00	General session IV (4 talks)
10:00–10:20	Coffee break
10:20–Noon	Paired Keynotes I (2 x 40 minutes) + Round Table Discussion
12:00–13:20	Lunch
13:20–15:00	Paired Keynotes II (2 x 40 minutes) + Round Table Discussion
15:00–15:20	Coffee break
15:20–17:00	Paired Keynotes III (2 x 40 minutes) + Round Table Discussion

Meetings and Conferences

CORS Business Meetings

September 28, 2012	CORS Council Meeting, Teleconference
November 30, 2012	CORS Council Meeting, Teleconference
January 25, 2013	CORS Council Meeting, Toronto, ON
April 5, 2013	CORS Council Meeting, Teleconference
May 26, 2013	CORS Council Meeting, Vancouver, BC
May 27, 2013	CORS Council Meeting, Vancouver, BC
May 28, 2013	CORS Annual General Meeting, Vancouver, BC

CORS Annual Conferences

May 27–29, 2013	CORS Annual Conference, Vancouver, BC http://www.cors.ca/cors2013
2014	CORS Annual Conference, Ottawa, ON
2015	CORS Annual Conference, Montreal, QC – joint with INFORMS
2017	CORS Annual Conference, Quebec City, QC – joint with IFORS

Other Conferences

2012 Sept. 4–5	CanQueue 2012 http://www.stats.uwo.ca/CanQ_2012
2012 Sept. 4–6	OR54 Annual Conference, Edinburgh, Scotland http://www.theorsociety.com/Pages/Conferences/OR54/OR54.aspx
2012 Oct. 12–13	ICORD Workshop – International Federation of Operational Research Societies, Djerba Island, Tunisia
2012 Oct. 14–17	INFORMS Annual Meeting, Phoenix, AZ http://meetings.informs.org/phoenix2012
2012 Nov. 17–20	Decision Science Institutes 43 rd Conference, San Francisco, CA https://www.decisionsciences.org/Annualmeeting/default.asp
2012 Dec. 9–12	2012 Winter Simulation Conference, Berlin, Germany http://www.wintersim.org
2013 Feb. 16–18	ICORES 2013 – 2 nd International Conference on Operations Research and Enterprise Systems, Barcelona, Spain http://www.icores.org/

2013 May 3–6	POMS 24 th Annual Meeting, Denver, CO http://www.pomsmeetings.org
2013 July 1–4	EURO/INFORMS Joint International Conference, Rome, Italy http://www.euro2013.org
2013 Oct. 6–9	INFORMS 2013, Minneapolis, MN
2014 Nov. 16–19	INFORMS 2014, San Francisco, CA

WWW Conference Listings

CORS-SCRO Conference Page: http://www.cors.ca/en/conferences/i_other.php

INFORMS Conference Home Page: <http://www.informs.org/Conf/Conf.html>

IFORS Conferences: <http://www.ifors.org/panorama/conferences/index.shtml>

Netlib Conferences Database: <http://www.netlib.org/confdb/Conferences.html>

SIAM Conference Home Page: <http://www.siam.org/meetings/calendar.php>

POMS Conference Page: <http://www.poms.org/conferences/>

CORS Funding Opportunities

Graduate Student Conference Support (GSCS) Program

CORS has established the GSCS program to encourage attendance of graduate students at conferences, symposia, or workshops specifically aimed at graduate students, such as student conferences, doctoral colloquia, and conferences for junior operations researchers. CORS may provide partial funding up to \$500 per student for attendance at such events. Note that the GSCS program will *not* fund attendance at CORS meetings, because CORS has a separate program for this purpose. All GSCS funding is subject to availability of funds and the following eligibility criteria:

- Student is a member of CORS.
- Student's supervisor 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 is a Canadian citizen or permanent resident studying abroad.

The application process is competitive. The following criteria will be used to select applications that will be funded:

- The quality of the paper to be presented at the conference, if applicable.
- The benefits that the student is likely to derive from attending the conference.
- The stage that the student has reached in his/her degree program.
- Prior GSCS funding received by the applicant (new applicants will be given preference, all else being equal).

An online application form for GSCS funding is available at http://www.cors.ca/en/students/i_graduate.php

Since funding is limited, applicants are encouraged to submit their applications in a timely manner. Applications must be received at least two months before the conference date to receive full consideration. Applicants who meet this deadline will be notified of the outcome of their application at least one month before the conference date.

For further information, contact the CORS GSCS Coordinator:

Fredrik Odegaard
Tel: (519) 661-4278
E-mail: fodegaard@ivey.uwo.ca

INFORMS Teaching Effectiveness Colloquium (For Faculty)

In conjunction with the annual INFORMS meetings, INFORMS hosts a Teaching Effectiveness Colloquium. CORS has funding available to partially support a limited number of faculty members interested in attending. Faculty members that are awarded funding are expected to:

- give a presentation in an OR/MS Education session at CORS Annual Meeting, and
- write a short article regarding OR/MS education for the CORS Bulletin.

Funding is restricted to faculty members, and not available to graduate students. For more information and instructions on how to apply please contact:

Fredrik Odegaard, CORS Education Chair
E-mail: fodegaard@ivey.uwo.ca

CORS Traveling Speakers Program

The Traveling Speakers Program (TSP) enables local sections to bring Canadian O.R. 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 report.

Samir Elhedhli CORS TSP Coordinator
Tel: (519) 888-4567
E-mail: elhedhli@uwaterloo.ca

The Next Issue

The next issue of the Bulletin is scheduled to appear at the end of October. Along with the regular features and news from the local sections, it will contain 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 **October 12, 2012** to:

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

CORS Bulletin Translating 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, e-mail Erla Anderson, CORS Membership Services at erla@shaw.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 O.R. 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 award ceremony, occasionally organized jointly with an international society (IFORS, INFORMS), as well as numerous local events organized by the local sections.

Local Sections: CORS has twelve local sections located throughout Canada and three student sections.

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 O.R.

Harold Larnder Memorial Award to an individual who has achieved international distinction in O.R.

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

Practice Prize for the challenging application of the O.R. 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 O.R. through the development of methodology or to another field through the application of O.R.

Graduate Student Funding: CORS encourages attendance of graduate students at conferences, symposia, or workshops by providing partial funding. Visit CORS website for details.

CORS Diploma: This diploma is awarded to students graduating from a university curriculum comprising several O.R. courses. Criteria and an example certificate 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 (www.cors.ca) and join online by credit card using the form found under membership services 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

Web site: <http://www.cors.ca>

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