



The CORS Bulletin

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IN THIS ISSUE

Dear CORS Members,

In this issue of the bulletin, we honour the memories of two CORS members who left a big mark on Operations Research in Canada, William Shelson and Eldon Gunn. I had the great fortune to witness Eldon's passion and enthusiasm for OR and higher learning first hand as a student at Dalhousie University. He co-supervised my graduate degree, a degree which he established, and helped launch my career. I'll remember him for his coolness under pressure and his stellar ability to put together a polished OR presentation on the flight to the conference.

This issue also highlights the nominees for the 2016-2017 CORS Council. Please take a look and read through the biographies to become familiar with each nominee's impressive qualifications.

Many CORS sections and special interest groups have been busy preparing and holding events in their areas. Read all about them and see if it inspires you to organise something similar in your section.

The conference is mere weeks away and the time to make travel arrangements is shrinking. Hopefully the final bulletin ad gets you excited to combine the thrill of OR with the beauty of Banff.

Cheers,

Andrea Friars

Editor

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<u>Publisher</u>	CORS/SCRO Box/C.P. 2225, Station D Ottawa, ON K1P 5W4
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THE 2015–2016 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 2015–2016 council representatives is provided below. For a complete listing go to www.cors.ca

President	Fredrik Ødegaard, University of Western Ontario, fodegaard@ivey.uwo.ca
Vice-President	Dionne Aleman, University of Toronto, aleman@mie.utoronto.ca
Secretary	Peter VanBerkel, Dalhousie University, peter.vanberkel@dal.ca
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Councillor	Satyaveer Chauhan, Concordia University, Satyaveer.Chauhan@concordia.ca
Councillor	Tatsiana Levina, Queen's University, tlevin@business.queensu.ca
Councillor	Michael Pavlin, Wilfrid Laurier University, mpavlin@wlu.ca
Atlantic	Claver Diallo, Dalhousie University, claver.diallo@dal.ca
Quebec	Irène Abi-Zeid, Université Laval, irene.abi-zeid@osd.ulaval.ca
Montréal	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
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	Justin J. Boutilier, University of Toronto, j.boutilier@mail.utoronto.ca
Waterloo Student	Saul Qishu Cai, University of Waterloo, saulcai@hotmail.com
Quebec Student	Samira Abbasgholizadeh Rahimi, Université Laval, samiraheme@yahoo.com

PRESIDENT'S MESSAGE

Greetings and Salutations my fellow OR'ers!

From the farm-field regions of south-western Ontario I can report that trees, bushes and plants are starting to bud. A spring-time symbolic sign of your research and teaching productivity I am sure, with grades, abstract submissions, conference registrations, review reports and RnR's all due. Just don't forget to in between also stop and smell the roses.

Personally it has been a self-imposed Sisyphusian semester with overload teaching, undergrad and graduate student supervision, a fully stacked plate of internal and external service commitments, feeble attempts to carve out personal research time, and of course the sacred Friday after-work beer! A high-light of my semester was attending the Analytics Day hosted by the Waterloo Analytics and Optimization Lab



(WANOPT); partially sponsored by the Southwest Ontario section of CORS. It was in particular exciting to see so many industry participants and hear first-hand their challenges and rewards of OR applications. Special kudos goes to Professor Fatma Gzara for organizing the event and bringing both researchers and practitioners together. I look forward to next year's and would encourage all of you to find ways to engage with industry practitioners.

On the topic of conferences and practitioners involvement, I hope to see you all at the annual CORS conference in Banff which now is just about a month away. Both registration and hotel bookings are well under way and I would encourage those of you who still have not arranged your travels and conference registration to do so ASAP. As you can see on the conference website we have some top-notch plenary and tutorial speakers and a very exciting Practitioners Day added to the program. Note too that both the CORS Annual General Meeting and Banquet will take place on the Tuesday May 31. Again, my thanks and mad props goes out to the stellar work of the organizing committee Diane, Marco, Osman, Mireille and supporting volunteers in putting the conference together.

From CORS Council we have had productive meetings and are moving our initiatives on – albeit some a bit slower than others. As I wrote in the previous Bulletin we have moved our journal INFOR to the publishing-group Taylor & Francis, and will soon be releasing the very first issue with them. I don't want to reveal too much but the journal has had a make-over and will feature a fresh and exciting design. As you work on your research projects, I encourage you all to consider INFOR as an outlet and make sure to visit the online submission portal at: <http://www.edmgr.com/tinf/Default.aspx>.

As we are approaching the end-of-year and annual elections for Council positions, I would like to remind and encourage you all to stay active within CORS – formally or informally, locally or nationally, big or small. To me, the main point of CORS is to bring people together and so whether it is to discuss research over a cup of coffee or giving a plenary-talk at the CORS conference doesn't really matter. As a network of OR'ers, the more people and more interaction

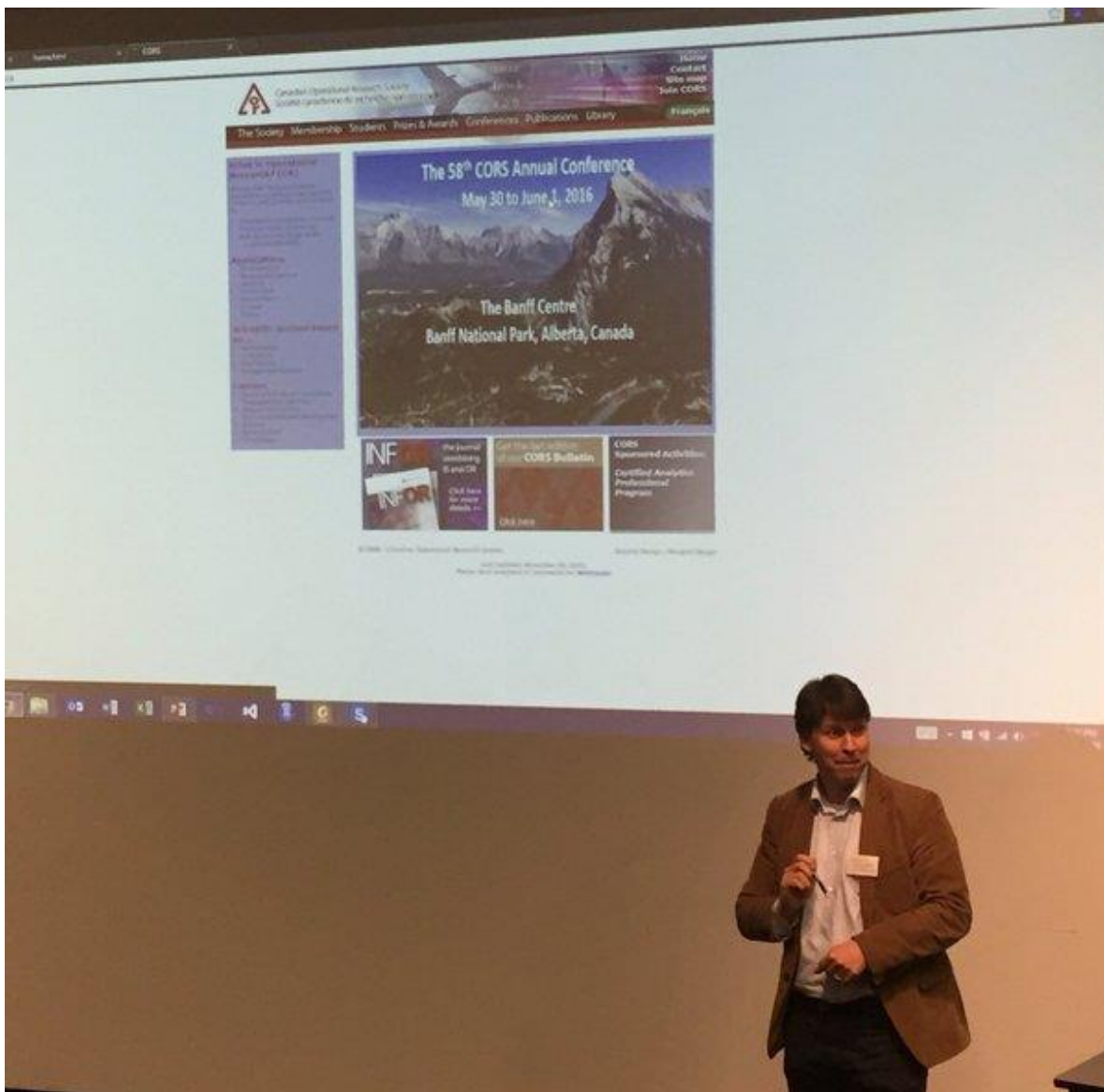
we have, the better, stronger, and more rewarding our connections become. In fact, there ought to be an OR model that proves that to be the case, as the empirical data speak for themselves: 58 years and counting as an organization. Thanks to all of you for being part of CORS.

Wish you all a sunny and productive Spring/Summer. And that's all I wrote as your President...

Fredrik Ødegaard



Twitter: @CORS_President
Email: fodegaard@ivey.uwo.ca



CORS ANNUAL CONFERENCE
MAY 30 – JUNE 1, 2016, BANFF, AB

ANNOUNCEMENTS

It's time to renew your CORS membership

Don't forget to renew your CORS membership. The membership year begins on April 1 and ends on March 31 of the following year. Go to <http://www.cors.ca> to renew online using your credit card or PayPal account or mail your credit card information or a cheque payable to the Canadian Operational Research Society to CORS/SCRO, BOX/C.P. 2225, STATION D, OTTAWA, ONTARIO K1P 5W4. If you do not wish to continue as a member of the Society, please contact Erla Anderson at membershipservices@cors.ca

Follow CORS on LinkedIn

<https://www.linkedin.com/company/canadian-operational-research-society>

NOMINEES FOR 2016-2017 CORS COUNCIL

Vice President: Dr. Louis-Martin Rousseau



Louis-Martin Rousseau is a full professor of Operations Research in the department of Mathematics and Industrial Engineering at École Polytechnique de Montréal, and since February 2016 he holds the Canada Research Chair in Healthcare Analytics and Logistics. His research focuses on solving complex, integrated decision problems which appear both in supply chain planning and execution (routing, scheduling, rostering) and in healthcare (homecare operations, hospital logistics, cancer treatment). Louis-Martin is the president of the Montreal CORS section since 2007, served two years on the CORS council (2011-2015) and was the general chair of the CORS/INFORMS meeting in 2015, see <https://w1.cirrelt.ca/~louism/> for more details.

Councillor 2016-2018: Dr. Stanko Dimitrov



Stanko Dimitrov is an Assistant Professor in the Department of Management Sciences at the University of Waterloo, Canada. He earned his PhD in Industrial and Operations Engineering from the University of Michigan. He helped organize the open category CORS student paper competition for 2016 annual conference and currently serves as a member of council for the INFORMS telecommunications section. His research interests lie in using optimization and game theory to address problems in decision analysis, production, and telecommunications. He is working on projects in telecommunication network routing, prediction markets, production planning, marketing, and operations management. Dr. Dimitrov's research is supported by various grants from the University of Waterloo, Mitacs, and the Natural Sciences and Engineering Research Council of Canada.

Councillor 2016-2018: Dr. Anjali Awasthi



Dr. Anjali Awasthi is Associate Professor at Concordia Institute for Information Systems Engineering (CIISE), in Concordia University, Montreal. She received a PhD in industrial engineering and automation from INRIA Rocquencourt & University of Metz, France. Prior to Concordia, Dr. Awasthi worked at Centre for Operations Excellence (COE), Sauder School of Business at University of British Columbia where she was involved in several projects on industrial applications of operations research. At University of Laval, she worked on wood supply chains and in France, she was involved in three European projects aimed at improving urban mobility in cities, city logistics and on cybernetic transportation systems. Dr. Awasthi has several years of industry and research experience in areas of automated transportation, sustainable mobility solutions, city logistics and applied operations research. She is the author of several journal and conference papers on these topics. Dr. Awasthi is a senior member of American Society for Quality (ASQ) and co-counsellor for its Montreal universities student branch. Dr. Awasthi has been serving CORS in the role of Undergraduate competition chair since 2009. From 2007-2008, she worked as Program Coordinator for CORS Vancouver chapter hosted at University of British Columbia. She has also been serving on the CORS student paper judging committee since 2008.

May 30 - June 1, 2016
The Banff Centre, Banff National Park, Alberta, Canada



Hosted by:



UNIVERSITY OF CALGARY
HASKAYNE SCHOOL OF BUSINESS

MEET OUR 2016 PLENARY SPEAKERS



Harold Larnder Memorial Lecturer: Dimitris Bertsimas

Boeing Professor of Operations Research and the co-director of the Operations Research Center at the Massachusetts Institute of Technology

Presenting Health Care Analytics: an analytics approach to a) personalized diabetes management and b) design of clinical trials for cancer.

- present a system to make personalized lifestyle and health decisions for diabetes management, as well as for general health and diet management.
- propose an analytics approach for the analysis and design of clinical trials that provides insights into what is the best currently available drug combination to treat a particular form of cancer and how to design new clinical trials that can discover improved drug combinations.



Pascal Van Hentenryck

Seth Bonder Collegiate Professor of Engineering at the University of Michigan

Optimization of Energy Systems: The design, control, and operation of energy systems typically require the solving of optimization problems over physical laws. The resulting optimization programs are often computationally challenging and increasingly so with the integration of renewable energy, the need for more resilience, and network integration.

View the full [Conference Program](#) and [register](#) to attend.
www.haskayne.ucalgary.ca/cors2016

Haskayne Featured Speaker: Sam Savage

Tutorial Speakers: Opher Baron • Mark Daskin • Ger Koole

Practitioners Day Speakers : Joey Cherdarchuk • Zaman Forootan • Randy Freeborn • Bertrand Groulx • Dan Haight • William Haskett • Glen Phillips

Conference Sponsors:



UNIVERSITY OF CALGARY
HASKAYNE SCHOOL OF BUSINESS
Canadian Centre for Advanced
Supply Chain Management and Logistics



GUROBI
OPTIMIZATION



THE VAN HORNE INSTITUTE



CORS ANNUAL CONFERENCE
MAY 30 – JUNE 1, 2016, BANFF, AB

NEW this year at CORS 2016



Presenting the Graduating Students: Introductions and Interactions

On the afternoon of Tuesday, May 31 there will be a special session to showcase students planning to go on the job market this year. Students will have the opportunity to present themselves and give a brief summary of their research interests and accomplishments. Afterward, there will be time to get to know these students better and have further individual discussions. Prospective employers from academia, and practitioners and recruiters from industry, are invited to attend. Come see the new crop of graduates in operations research and analytics - some of whom could be your future colleagues.

Other events:

CAP & Associate CAP : Certified Analytics Professional

exams will be offered on the evening of Monday, May 30. Take advantage of this opportunity to complete your CAP certification.

NSERC Workshop:

How to Prepare a Discovery Grant Application

NSERC Staff and a Section Chair of the Civil, Systems and Industrial Engineering Evaluation Group will present an overview of the peer review process.

Advice will be given on how to prepare a Discovery Grant application. The workshop will cover topics such as Discovery Grants Evaluation Groups, criteria for evaluation and ratings, tips on how to prepare an application. While the workshop will be most helpful to new faculty members and those preparing applications this fall, all researchers are welcome to attend. A question period will follow the presentation.

CORS 2016 Program Cluster Chairs

Applications of OR in Extraction Industries
Andrew Bennett, Chevron Canada Limited

Applications of OR in Forestry
Claudia Cambero, University of British Columbia
Taraneh Sowlati, University of British Columbia

Applied Probability and Stochastic Optimization
Opher Baron, University of Toronto

Behavioral Operations
Anton Ovchinnikov, Queen's University

Business Analytics
Armann Ingolfsson, University of Alberta

E-Business
Byungwan Koh, University of Calgary

Energy and Sustainable Operations
Xuan Zhao, Wilfrid Laurier University

Finance and Risk Management
Rogemar Mamon, University of Western Ontario

Healthcare Operations
Nadia Lahrichi, Polytechnique Montreal
David Stanford, University of Western Ontario

Mathematical Programming and Optimization
Miguel F. Anjos, Polytechnique Montreal

Military and Security Applications
Rene Seguin, Defense Research and Development Canada

OR Education
Janice Eliasson, University of Calgary

Queueing Theory
Steve Drekic, University of Waterloo

Revenue Management and Pricing
Mikhail Nediak, Queen's University

Supply Chain Management
Harish Krishnan, University of British Columbia
Tim Huh, University of British Columbia

Transportation and Logistics
Jean-François Cordeau, HEC Montreal

Conference Exhibitors:



www.haskayne.ucalgary.ca/cors2016

2016 HAROLD LARNDER AWARD WINNER

Dimitris Bertsimas



Dimitris Bertsimas is the Boeing Professor of Operations Research and the co-director of the Operations Research Center at the Massachusetts Institute of Technology. He has received a BS in Electrical Engineering and Computer Science at the National Technical University of Athens, Greece in 1985, a MS in Operations Research at MIT in 1987, and a Ph.D. in Applied Mathematics and Operations Research at MIT in 1988. Since 1988, he has been with the MIT faculty. Since the 1990s he has started several successful companies in the areas of financial services, asset management, health care, publishing, analytics and aviation. His research interests include analytics, optimization and their applications in a variety of industries. He has co-authored more than 170 scientific papers and he has co-authored four graduate level textbooks. He is former area editor in Operations Research in Financial Engineering and in Management Science in Optimization. He has supervised 57 doctoral students and he is currently supervising 16 others.

Health Care Analytics

Abstract: In this talk we present an analytics approach to a) personalized diabetes management and b) design of clinical trials for cancer. In the first part of the talk, we present a system to make personalized lifestyle and health decisions for diabetes management, as well as for general health and diet management. In particular, we address the following components of the system: (a) efficiently learning preferences through a dynamic questionnaire that accounts for human behavior; (b) modeling blood glucose behavior and updating these models to match individual measurements; and (c) using the learned preferences and blood glucose models to generate an overall diet and exercise plan using mixed-integer robust optimization. We have implemented our system as an online application, which we demonstrate. (Joint work with Allison O' Hair). In the second part of the talk, we propose an analytics approach for the analysis and design of clinical trials that provides insights into what is the best currently available drug combination to treat a particular form of cancer and how to design new clinical

trials that can discover improved drug combinations. We develop semi-automated extraction techniques to build a comprehensive database of data from clinical trials. We use this database to develop statistical models from earlier trials that are capable of predicting the survival and toxicity of the combination of the drugs used, when the drugs used have been seen in earlier trials, but in different combinations. Then, using these statistical models, we develop optimization models that select novel treatment regimens that could be tested in clinical trials, based on the totality of data available on existing combinations. We also present concrete models for gastric cancer, one of the leading causes of cancer death worldwide. Ultimately, our approach offers promise for improving life expectancy and quality of life for cancer patients at low cost. (Joint work with Allison O' Hair, Stephen Relyea and John Silberholz).

The Harold Larnder Prize is awarded annually to an individual who has achieved international distinction in operational research. Harold Larnder was a well-known Canadian in wartime OR. He played a major part in the development of an effective, radar-based, air defence system during the Battle of Britain. He returned to Canada in 1951 to join the Canadian Defence Research Board and was President of CORS in 1966-67.

IN MEMORIAM

Eldon Gunn



Dr. Eldon Archibald Gunn, P.Eng., Professor Emeritus of Industrial Engineering at Dalhousie University and former CORS President, passed away on February 11, 2016 at the age of 66. He is survived by his wife, Holly, his children Heather and James, and three grandchildren.

Eldon received a BSc(Hon) in Mathematics from Mount Allison University in 1971, an MSc in Mathematics from Dalhousie University in 1975 and a PhD in Industrial Engineering from the University of Toronto in 1981. He began his career as a researcher at the Nova Scotia Research Foundation in 1971 and started his teaching career at the University of Toronto in 1978, before joining the Technical University of Nova Scotia (TUNS) as an Assistant Professor of Industrial Engineering in 1980.

Eldon was instrumental in building and developing Industrial Engineering in Atlantic Canada. He transformed the Industrial Engineering department by establishing a strong research program and revitalized the graduate studies programs by establishing the Master of Applied Science and PhD in Industrial Engineering. He was the Head of the Industrial Engineering Department at Dalhousie University from 1996-2004 and from 2007-2010 and is primarily responsible for the growth and success of the TUNS/Dalhousie program.

Eldon has been a mainstay of operational research in Canada since the 1970s. From his early start working for the Nova Scotia Research Foundation to his recent work with the Natural Sciences and Engineering Research Council of Canada (NSERC) Value Chain Optimization (VCO) Network, Eldon was on the forefront of OR in this country, particularly in solving problems in the natural resources area. He has a long, distinguished, and accomplished record of research in both the theory and practice of OR. He published many journal papers, conference papers, book chapters and other materials in OR, focusing on manufacturing control, forest management optimization, mine operations, fisheries operations, tidal power and optimization techniques. His forestry work dates back more than 40 years, beginning with his development of strategic and harvest planning models for Scott Maritimes. He was the founding Chair of Nova Forest Alliance, Nova Scotia's Model Forest and served as Chair of the NS Department of Natural Resources Minister's Technical Advisory Committee on Sustainable Forest Management. He was a key investigator and theme leader with the VCO Network, and worked with FP Innovations developing software models to optimize harvesting and processing.

He served the OR community through his dedication to CORS, serving as President from 1991-92. He received the Service Award (1987), twice won the Practice Prize (in 1999 and 2009),

and in 2011, he received the CORS Award of Merit. In 2014, he became an Emeritus Member of CORS. He served on several NSERC committees and chaired the NSERC Grant Selection Committee for Industrial Engineering. He was a member of Engineers Nova Scotia, INFORMS, the Mathematical Programming Society and was a senior member and Fellow of the Institute of Industrial Engineers.

When he was younger, he loved playing basketball in high school and university and, later, in the Metro Men's Masters League. He loved days at the cottage with family and friends, and he loved working in his woodlot.

Eldon was a source of deep knowledge in many areas, which he shared freely. Passing conversations in the hall could turn into detailed discussions of complex topics ranging from the application of approximate dynamic programming in hydro-electric dams, to the writings of Northrop Frye, to the joys of fly fishing at Soldier Lake.

He will be remembered for his insistence on “doing the right thing”, his meticulous attention to detail in his teaching, research and graduate supervision, and his dedication to the Industrial Engineering Department at Dalhousie.

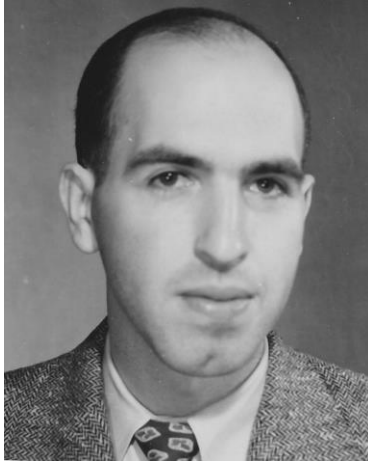
“I know from personal experience that perhaps Eldon's strongest contribution has been his ability to mentor and foster development of undergraduates, graduates, and newly minted faculty. Quite simply, Eldon Gunn has been a pillar of OR in Atlantic Canada and beyond.” - John Blake (CORS President, 2004-5)

“Eldon not only made my PhD program an enjoyable and successful enterprise but continued to support and mentor me as a new faculty member and a novice researcher. His mentoring extended far beyond OR to include professional ethics, advice on career choices, how to deal with search committees and other challenges that arise in academia. I have the ultimate respect for Eldon's judgment and standards and profited from his advice many times.” - Evelyn Richards (CORS President, 2007-8)

The Eldon A. Gunn Memorial Scholarship Fund is being established in Industrial Engineering at Dalhousie University in his memory.

IN MEMORIAM

William Shelson



By Jim Bookbinder

Dr. Bill Shelson was the head of the OR group at Ontario Hydro. Bill was an important early member of CORS, but I knew him primarily in his role as head of the OR group at Hydro. In my initial time as head of Operations Research at the Toronto Transit Commission, I had a couple of meetings with Bill to understand how he managed the Hydro OR group, and how they tackled particular types of projects.

In the 1970s, OR tended to be a centralized function. Ontario Hydro, more recently split into Ontario Power Generation and Hydro 1, was able to employ its Operations Research group to excellent effect. This impact was far greater than one would have guessed by the numbers of OR professionals involved.

Ontario Hydro was also prominent in the Toronto OR community for other reasons. The Toronto Section of CORS used to have monthly lunch meetings at what was then called Hydro Place (at College Street and University Avenue, near the south end of U of T). Dr. Shelson facilitated our use of a nice auditorium there, at no rental expense to CORS Toronto. Senior members of his OR group were active as officers of the local CORS section.

Bill Shelson was thus a key OR practitioner, in terms of his direct and indirect influence on our CORS society, and on our profession in its formative years.

By Lorne Shelson

Dad was born in Toronto in 1922 and attended Harbord Collegiate Institute. He graduated with a B.A.Sc. in Mechanical Engineering in 1944 from U of T. He then volunteered for the army where he served in the Royal Canadian Electrical and Mechanical Engineers as a Lieutenant. After he was discharged in 1946, Dad obtained an M.S. in Engineering Mechanics from Penn State University in 1947.

Dad then worked for two years as a Stress Analyst in the Propeller Division of Curtiss-Wright Corporation in New Jersey before becoming a research associate in Applied Mathematics at Brown University. He returned to U of T in 1950 as the Shell Oil Corp. Research Fellow under Professor I. W. Smith. He worked briefly for Canadian Standards Association's Approvals Lab before resuming his work at U of T in 1951 and completing his Ph.D. in Engineering involving photo-elastic stress analysis in 1952, through the support of the Babcock-Wilcox and Goldie-McCulloch Fellowships.

In 1952, Dad began his long career at Ontario Hydro as a Research Engineer in Applied Mechanics, moving into the developing field of operations research in 1955 and becoming Chairman of the Operations Research Group in 1956. He was involved in numerous studies including inventory management, equipment replacement policy, production scheduling, management information and control systems, and long-range planning. In 1973, he joined the Fuels Division and, at the time of his retirement from Hydro in 1983, was Manager, Energy Resources Planning.

Dad was a frequent lecturer including at U of T, the American Society of Mechanical Engineers, and the American Management Association and published a number of papers on engineering subjects and operations research. A co-founder of the Operations Research Society to Toronto, he was a member of various professional societies including CORS, ORSA and APEO.

CORS FUNDING OPPORTUNITIES

CORS 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 report.

Taraneh Sowlati, TSP Coordinator, Email: taraneh.sowlati@ubc.ca

CORS SPECIAL INTEREST GROUPS (SIGs)

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)
University of British Columbia, Department of Wood Science
or go to <http://cors-forestrysig.pieorswirls.com/>
- CORS Health Care Operational Research SIG:
contact Armann Ingolfsson (armann.ingolfsson@ualberta.ca)
Alberta School of Business, University of Alberta
- CORS Queueing Theory SIG:
contact Steve Drekić (sdrekić@uwaterloo.ca)
University of Waterloo, Department of Statistics & Actuarial Science

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 Chair: Dionne Aleman (aleman@mie.utoronto.ca)

CORS SIG NEWS

Queueing

Plans for CanQueue 2016 are well underway. This year's edition is scheduled to take place on August 22nd and 23rd at McMaster University in Hamilton, Ontario, and it will feature Mor Harchol-Balter from Carnegie Mellon University as a keynote speaker. Further details concerning CanQueue 2016 can be found at <http://www.cas.mcmaster.ca/canqueue/>. Also, please feel free to contact the Conference Chair Doug Down (downd@mcmaster.ca) for more information.

Health Care

It has been a busy few months in for HCOR members and officers including officer elections, preparing for bylaw updates, our first annual student competition and preparing for the upcoming CORS meeting in Banff.

HCOR Members Meeting at CORS

The annual HCOR SIG meeting will be held on Monday May 30 at 6:00 PM MT in Banff. We hope to see everyone interested in healthcare applications of operational research at our meeting. This year, the HCOR SIG meeting is scheduled such that it does not conflict with the Queuing and Forestry SIGs, allowing members with interest in more than one SIG to attend. The agenda will include introduction of the 2016/17 officers, a vote on the proposed by law changes, information about our first annual student competition, and more.

HCOR Student Competition Results

We received a total of 7 submissions for our first annual student competition. The five finalists will be presenting at the CORS meeting in Banff. The winning submission will be announced at the CORS conference, based on the judge panel's assessment of the submission video and conference presentations.

HCOR Officers for 2016/17

In March we held electronic elections for three vacant officer positions. The election results are in and our 2016/17 officer slate is as follows:

- President: Sonia Vanderby
- Vice-President: Tim Chan
- Secretary/Treasurer/web content: Justin Boutillier
- Communications Officer: Daphne Sniekers
- Track Organisers: Peter Vanberkel
- Past-President: Armann Ingolfsson

Thank you to our outgoing officers Dionne Aleman (outgoing secretary/treasurer) and David Stanford (track organiser) for your service and leadership in HCOR SIG.

HCOR By laws Update

Last month, we sent members our proposed by law updates for consideration. We will discuss and hold a vote on the updated by laws during the meeting at CORS.

Healthcare Sessions at the CORS Meeting

There are 15 healthcare sessions scheduled at the CORS meeting in Banff. The schedule will be finalised soon, stay tuned.

Reminder to Renew your HCOR SIG Membership with your CORS Membership

When you are renewing your CORS membership this spring, don't forget to select the HCOR SIG membership as well. In order to be captured in the membership list to receive information, etc., you need to renew each year.

Forestry

3rd David Martell Student Paper Prize in Forestry

With great pleasure we communicate the three finalists of the 2016 David Martell Student Paper Prize in Forestry:

- Amine Amrouss (Université de Montréal): Real-time management of transportation disruptions in forestry.
- Rezvan Rafiei (Université Laval): Dynamic safety stock in co-production demand-driven wood remanufacturing mills: A case study.
- Tassedra Boukherroub (Université Laval): A framework for sustainable forest resource allocation: A Canadian case study.

The names of the finalists shown above are in alphabetical order, and the selection of the prize winner will be at a special session within the OR Applications in Forestry cluster at the upcoming CORS Annual Conference in Banff. During the session, the finalists will present their paper's work in front of a jury composed by Professors David Martell, Mikael Rönnqvist and Taraneh Sowlati. The session will be moderated by one of the founders of the prize: Professor Jean-François Audy. The special session is open to all conference attendees. We would like to acknowledge all the students who applied to this competition and highlight the quality of all the submitted papers.

OR Applications in Forestry cluster at the 2016 CORS Conference

The cluster chairs of this year's OR Applications in Forestry cluster, Taraneh Sowlati and Claudia Cambero, are happy to announce that this year's cluster will have 8 regular sessions:

- OR applications in forest management (session chair: Gregory Paradis)
- OR applications in the forest product sector (session chair: Mustapha Ouhimmou)
- Management of forest bioenergy value chains (session chair: Taraneh Sowlati)
- Managing flammable landscapes under uncertainty (session chair: David Martell)
- Forest management under uncertainty (session chair: Catalin Ristea)
- Interfirm collaboration in the forest sector (session chair: Jean-François Audy)

- Logistics planning in forest value chains (session chair: Mikael Rönqvist)
- Minimizing the “garbage-in-garbage-out” syndrome in forest optimization models (session chair: Marian Marinescu)

In addition to this year’s regular presentations, a special session will be held with presentations from the 2016 David Martell Student Paper Prize in Forestry, and a special session will be held in memory of Professor Eldon Gunn, to honor his contributions to Strategic Forest Planning. If you would like to join the Forestry SIG, please contact Claudia Cambero at: claudia.cambero@fpinnovations.ca.

CORS SECTIONS NEWS

Analytics Day: From Data to Decisions

Analytics Day 2016 was held at the University of Waterloo on April 15, and was organized by Dr. Fatma Gzara and WANOPT (Waterloo Analytics and Optimization Lab) of Management Sciences, University of Waterloo. The event was sponsored by the Canadian Operational Research Society through the South-Western Ontario section and the Traveling Speakers Program, and the University of Waterloo’s Faculty of Engineering and Department of Management Sciences.

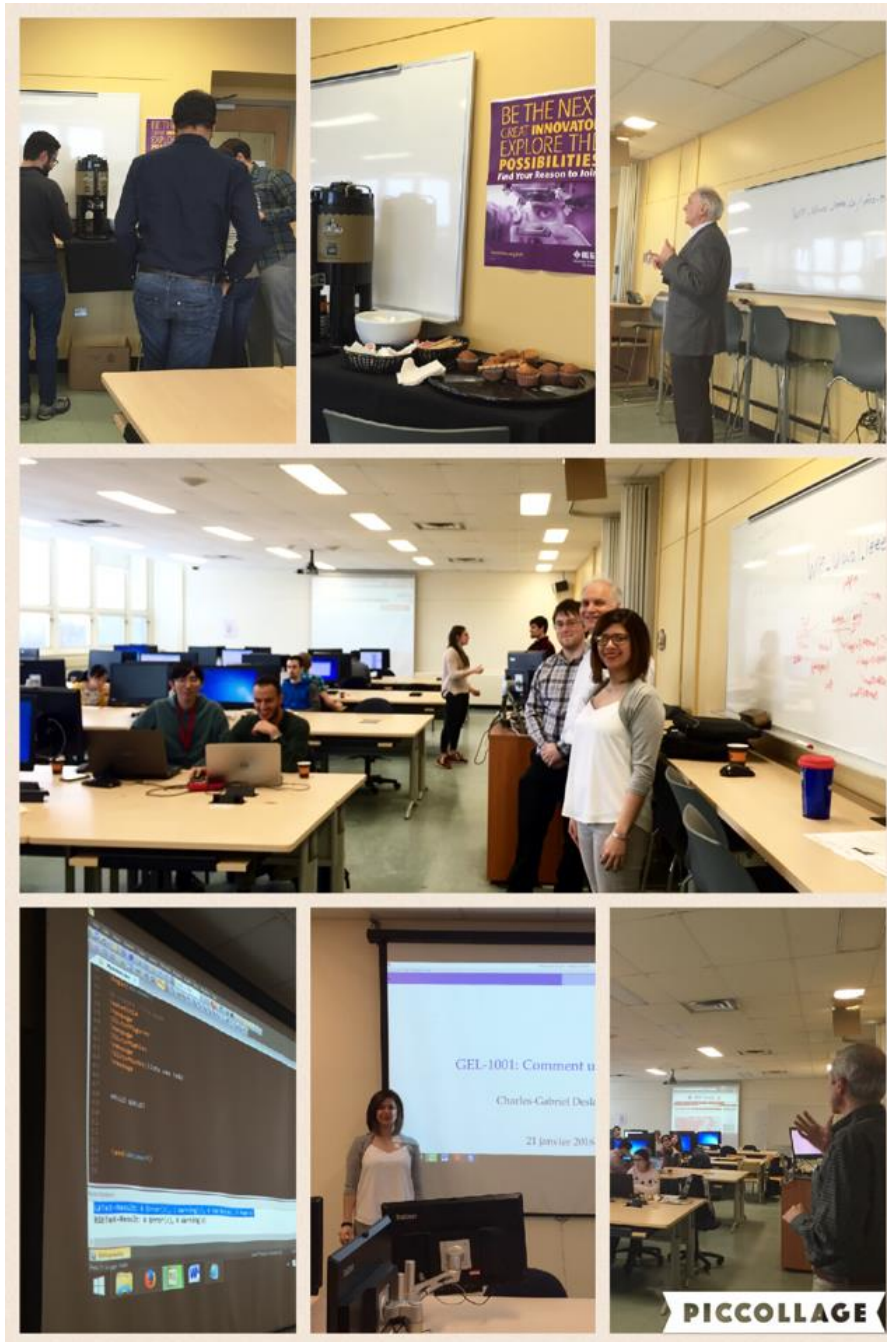
The goal of Analytics Day was to promote analytics by bringing together researchers, students, and industry experts. The event provided a great opportunity to exchange ideas, share experiences, and discuss needs. The event was very well attended. It attracted practitioners in such fields as cybersecurity, enterprise mobility management, supply chain and logistics, and insurance. Both faculty and graduate students from the University of Waterloo, McMaster University, University of Western Ontario and University of Guelph took part in the event.

Dr. Anna Nagurney, John F. Smith Memorial Professor, University of Massachusetts Amherst, gave an engaging plenary talk on “*Predictive and Prescriptive Models of Cybercrime and Cybersecurity Investments Under Network Vulnerability.*” Pete Devenyi and Scott Wahl of Dematic North America talked about “*Using Data Analytics to Optimize the Supply Chain*”. Chadi Elkadri, Reza Farahani, and Hany Kashif of SOTI focussed on Performance Aware Analytics in the context of connected devices and Internet of Things. The academic talk given by Dr. Joe Naoum Sawaya of the Ivey School at the University of Western Ontario is entitled “*Optimization in the Age of Modern Analytics and Internet-of-Things*” and presented models to match energy supply and demand in the automotive industry. Snehar Patel and Niraj Dalmia of Deloitte Consulting Canada talked about “*Leveraging Analytics to Drive Business Value*”. They presented predictive models of disruption in an oil and gas company and prescriptive simulation models for health care facilities. Dr. Fatma Gzara, the organizer, gave a talk on “*Data Analytics for warehouse management*” and reported and descriptive and prescriptive models developed in partnership with industry partner Dematic.

Presentation slides and event pictures are available and may be downloaded at <http://www.watopt.uwaterloo.ca/analyticsdayfiles.html> .



LaTeX workshops at Quebec Section, Université Laval



The CORS Quebec Student Section and the IEEE WIE Quebec Section organized two LaTeX workshops on March 17 and [March 31, 2016](#). The workshops were successfully held at Université Laval and offered in both French and English. To view more photos from the event, please visit the following link:

<https://drive.google.com/folderview?id=0B4hgGP4lqNCqRU9zVVZSXzAtcUU&usp=sharing>

MEETINGS AND CONFERENCES

CORS Business Meetings

June 17, 2015	CORS Council Meeting, Montreal, QC
August 21, 2015	CORS Council Meeting, Teleconference
November 27, 2015	CORS Council Meeting, Teleconference
January 22, 2016	CORS Council Meeting, Toronto, ON
April 1, 2016	CORS Council Meeting, Teleconference
April 22, 2016	CORS Financial Planning Committee Meeting
May 6, 2016	CORS Council Meeting, Teleconference
May 29, 2016	CORS Council Meeting, Banff, AB
May 30, 2016	CORS Council Meeting, Banff, AB
May 31, 2016	CORS Annual General Meeting, Banff, AB

CORS Annual Conferences

May 30–June 1, 2016	CORS Annual Conference, Banff, AB
July 17–21, 2017	CORS/IFORS Conference, Quebec City, QC
2018	CORS Annual Conference, Halifax, NS

WWW Conference Listings

CORS 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/>

THE NEXT ISSUE

The next issue of the Bulletin is the post-conference issue and is scheduled to appear in August. Along with the regular features and news from the local sections, it will include information about the 2016 winners of CORS Awards and announce the 2016-2017 CORS Council. Contributions to this issue, especially news on the activities of local sections or CORS members, should be submitted by **July 22, 2016** 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: CORS has twelve local sections located throughout Canada and two 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 OR.

Harold Larnder Memorial 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 (www.cors.ca) 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 (including post-doctoral fellows) \$45

Website: <http://www.cors.ca>

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

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