



CORS • SCRO

Canadian Operational Research Society
Société canadienne de recherche opérationnelle

The
Bulletin

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TABLE OF CONTENTS

PAGE

In This Issue	2
The 2018–2019 Council	3
Recent Changes to Council and Committees	4
Outgoing President's Message	5
Incoming President's Message	7
CORS Award Winners	9
Harold Larnder Prize: John Birge	10
Omond Solandt Award: Canadian Blood Services	11
CORS Award of Merit: Mahmut Parlar	12
Eldon Gunn Service Award: Anjali Awasthi and Fredrik Ødegaard	13
CORS Practice Prize: Florian Grenouilleau	15
CORS Student Paper Competition	16
Open, First Prize: Taghi Khaniyev	
Open, Honourable Mentions: Gohram Baloch and Rafid Mahmood	
Undergraduate, First Prize: Negin Bolkhanian and Matthew Reyers	
Undergraduate, Honourable Mention: Craig Fernandes	
Forestry SIG David Martell Student Paper Prize: Maha Ben Ali	20
Queueing Theory SIG Student Paper Prize: Jalal Khamse-Ashari	21
2018–2019 CORS Budget	22
2017–2018 CORS Membership Report	23
2019 CORS Conference	25
Announcements	26
CORS Emeritus Member: Peter Bell	
CORS Funding Opportunities: Traveling Speakers Program	
Special Interest Groups (SIGs)	27
SIG News	28
Meetings and Conferences	29
The Next Issue	30
CORS Bulletin Translation Policy	
CORS Bulletin Advertising Policy	
CORS ListServ	
About CORS	31



IN THIS ISSUE

Dear CORS members,

In this issue, we start things off with a huge thank you to Dionne Aleman for pulling double duty as CORS president these past two years, and welcome Mehmet Begen for the 2018–19 year. Their outgoing and incoming messages highlight the recent changes and successes within CORS and showcase important plans for the future. You will also find a complete list of council and their contacts for the new year.

As always, the post-conference issue is full of photos, award and prize winners, and other highlights. The 60th annual CORS conference in Halifax, NS was a great success, and everyone will be talking about the food in particular for years to come. This year's conference featured two reveals, the first being the newly updated CORS logo, as voted on by all members. You may have already noticed that this issue is sporting the new look. Secondly, the Service Award has been renamed in honour of Eldon Gunn. As someone who had the privilege to study with Eldon for many years, I found this to be a particularly wonderful and touching tribute. Read about the first recipient of the newly named Eldon Gunn Service Award in this issue.

Next year's conference will take place in Saskatoon, SK, May 27–29, so save the date. The conference website is up and running (www.cors2019.ca), and you should keep it bookmarked for updates.

Lastly, you'll find a breakdown of next year's budget as well as a full membership report.

Cheers,

Andrea

Editor

Andrea Friars

Publisher

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Box/C.P. 2225, Station D
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Erla Anderson

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President
Vice-President
Past-President
Secretary
Treasurer
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Mehmet Begen
Stanko Dimitrov
Dionne Aleman
Peter VanBerkel
Sonia Vanderby
Bora Kolfal, Jules Comeau (17–19)
Anjali Awasthi, Marco Bijvank (18–20)

Standing Committees

Awards

Stanko Dimitrov, Jules Comeau,
Marco Bijvank

Education
Membership
Program
Public Relations
Publications

Anjali Awasthi
Bora Kolfal
Stanko Dimitrov
Dionne Aleman
Samir Elhedhli, Elkafi Hassini,
Andrea Friars

Past Presidents
Advisory Board

Stanko Dimitrov, Jules Comeau,
Marko Bijvank

SIG
Section Relations

Stanko Dimitrov, Marco Bijvank
Stanko Dimitrov, Bora Kolfal,
Marco Bijvank, Sonia Vanderby

Ad hoc Committees

Practice Prize
Student Paper
Competition
Award of Merit

TBA
Tamon Stephen
Dionne Aleman, Mahmut Parlar,
John Chinneck

Financial Planning

Sonia Vanderby, Dionne Aleman,
Mehmet Begen, Stanko Dimitrov

Analytics

Jules Comeau

Industry

Mehmet Begen, Dionne Aleman,
Hatem Ben Amor

Nominating
Travelling Speakers
Program
INFOR Co-Editors
Bulletin Editor
IFORS
Representative
Membership Services
Web Administrator

Dionne Aleman
Dionne Aleman
Samir Elhedhli, Elkafi Hassini
Andrea Friars
Peter VanBerkel

Erla Anderson
Erla Anderson

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www.cors.ca
www.linkedin.com/company/canadian-operational-research-society
[@CORS_President](https://twitter.com/CORS_President)

Twitter

THE 2018–2019 COUNCIL

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

President	Mehmet Begen, Western University, mbegen@ivey.uwo.ca
Vice-President	Stanko Dimitrov, University of Waterloo, sdimitro@uwaterloo.ca
Secretary	Peter VanBerkel, Dalhousie University, peter.vanberkel@dal.ca
Treasurer	Sonia Vanderby, University of Saskatchewan, sonia.vanderby@usask.ca
Past-President	Dionne Aleman, University of Toronto, aleman@mie.utoronto.ca
Councillor	Bora Kolfal, University of Alberta, bkolfal@ualberta.ca
Councillor	Jules Comeau, Université de Moncton, jules.comeau@umoncton.ca
Councillor	Anjali Awasthi, Concordia University, anjali.awasthi@concordia.ca
Councillor	Marco Bijvank, University of Calgary, marco.bijvank@haskayne.ucalgary.ca
Atlantic	Claver Diallo, Dalhousie University, claver.diallo@dal.ca
Québec	Irène Abi-Zeid, Université Laval, irene.abi-zeid@osd.ulaval.ca
Montréal	Miguel Anjos, École Polytechnique de Montréal, miguel-f.anjos@polymtl.ca
Ottawa	Dragos Calitoiu, Bank of America, Ottawa, calitoiu@optimod.ca
Kingston	Bill Simms, Royal Military College of Canada, simms-b@rmc.ca
Toronto	Adam Diamant, York University, ADiamant@schulich.yorku.ca
Southwest Ontario	Joe Naoum-Sawaya, Western University, jnaoum-sawaya@ivey.ca
Winnipeg	Currently vacant
Saskatoon	Hamed Samarghandi, University of Saskatchewan, samarghandi@edwards.usask.ca
Calgary	Owen James, jameso@ae.ca
Edmonton	Armann Ingolfsson, University of Alberta, armann.ingolfsson@ualberta.ca
Vancouver	Stuart Donald, University of British Columbia, stuart.donald@sauder.ubc.ca
Toronto Student	Kyle Booth, University of Toronto, kyle.booth@mail.utoronto.ca Christopher Sun, University of Toronto, christopher.sun@mail.utoronto.ca
Waterloo Student	Danielle Ripsman, University of Waterloo, daripsman@uwaterloo.ca
Québec Student	Samira Abbasgholizadeh Rahimi, Université Laval, samiraheme@yahoo.com
Montréal Student	Carlos Armando Zetina, Concordia University, c_zetina@encs.concordia.ca

RECENT CHANGES TO COUNCIL AND COMMITTEES

Post	Previous	New
Council		
President Vice-President Past-President Secretary Treasurer Councillors	Dionne Aleman Mehmet Begen Fredrik Ødegaard Peter VanBerkel Sonia Vanderby Stan Dimitrov, Anjali Awasthi Bora Kolfal, Jules Comeau	Mehmet Begen Stanko Dimitrov Dionne Aleman Peter VanBerkel Sonia Vanderby Bora Kolfal, Jules Comeau, Anjali Awasthi, Marco Bijvank
Standing Committees		
Awards Education Membership Program Public Relations Publications Past Presidents Advisory Board SIG Section Relations	Mehmet Begen, Jules Comeau, Stanko Dimitrov Anjali Awasthi Bora Kolfal Mehmet Begen, Bernard Gendron, Corinne MacDonald Dionne Aleman Samir Elhedhli, Elkafi Hassini, Andrea Friars Dionne Aleman, Fredrik Ødegaard, Peter Bell, David Martell, Rick Caron Mehmet Begen Bora Kolfal, Anjali Awasthi, Sonia Vanderby	Stanko Dimitrov, Jules Comeau, Marco Bijvank Anjali Awasthi Bora Kolfal Stanko Dimitrov, Corinne MacDonald, Peter VanBerkel, Fredrik Ødegaard, Kent Kostuk Dionne Aleman Samir Elhedhli, Elkafi Hassini, Andrea Friars Stanko Dimitrov, Jules Comeau, Marco Bijvank Stanko Dimitrov, Marco Bijvank Stanko Dimitrov, Bora Kolfal, Marco Bijvank, Sonia Vanderby
Ad hoc Committees		
Practice Prize Student Paper Competition Award of Merit Financial Planning Analytics Industry Nominating Travelling Speakers Program INFOR Co-Editors Bulletin Editor IFORS Representative	Mikael Rönnqvist Nadia Lahrichi, Stanko Dimitrov Fredrik Ødegaard, John Chinneck, Jean-François Cordeau Sonia Vanderby, Fredrik Ødegaard, Dionne Aleman, Mehmet Begen Jules Comeau, Peter Bell, Marie-Claude Côté Dionne Aleman, Fredrik Ødegaard, Hatem Ben Amor Fredrik Ødegaard Fredrik Ødegaard Samir Elhedhli, Elkafi Hassini Andrea Friars Peter VanBerkel	TBA Nadia Lahrichi, Tamon Stephen Dionne Aleman, Mahmut Parlar, John Chinneck Sonia Vanderby, Dionne Aleman, Mehmet Begen, Stanko Dimitrov Jules Comeau Dionne Aleman, Fredrik Ødegaard Dionne Aleman Dionne Aleman Samir Elhedhli, Elkafi Hassini Andrea Friars Peter VanBerkel



OUTGOING PRESIDENT'S MESSAGE



Hello for the last time CORS members,

Once again, I am the outgoing president, for the second time, for the last time. It's been a whirlwind two years, and I am happy to have survived and to have CORS survive along with me.

As I look back over the year, the thing that stands out most is the tremendous effort of my fellow Council members: **Past President Fredrik Odegaard**, **VP Mehmet Begen**, **Secretary Peter VanBerkel**, **Treasurer Sonia Vanderby**, and **Councillors Jules Comeau**, **Bora Kolfal**, **Anjali Awasthi**, and **Stan Dimitrov**. Fredrik deserves extra thanks for being my Past President twice. I would like to particularly commend Peter for keeping us all organized on track, and Sonia for doing the tireless job of getting our finances in enough order to actually pay our taxes and get audited so that we can be eligible for a credit card. Thank you to all of the 2017–18 Council for helping guide CORS in our 60th year.

It is only appropriate to review my strategic goals for my presidency, and how much progress was made along each. Those goals were industry involvement, analytics, improved INFOR presence, improved web presence (including SIG/Section sites and a new CORS logo), and historical records collection. Industry involvement continues to be a challenge, but we have made great strides in all other areas: we have a new website and a new logo; there is more equitable dues sharing with sections; we increased student funding by 50%; we have a draft official privacy policy (led by incoming VP **Stan Dimitrov**); and an analytics SIG will be created in the next few months (spearheaded by Councillor **Jules Comeau**).



We are also in excellent financial standing, the best ever, and I would be remiss not to yet again thank last year's Quebec City IFORS chairs **Irène Abi-Zeid, Bernard Gendron, Michael Morin, and Angel Ruiz** for delivering this nest egg. Thanks to our financial position, we were able to make our 60th anniversary conference in Halifax truly memorable, with a reception on the pier and lobster at the banquet. Conference co-chairs **Corinne MacDonald** and **Peter VanBerkel** and their organizing committee deserve all the credit for a wonderful and memorable conference, despite the cold rain and frost advisories.

Our INFOR journal has continued to make great strides under **Samir Elhedhli and Elkafi Hassini's** leadership, with the impact factor doubling from 2016 to 2017. Submit some of your manuscripts to INFOR—think of it as an investment with a high probability of strong impact factor in the near future.

In addition to contributing back to our journal, I encourage everyone to contribute back to CORS. **Get involved**, especially students and junior faculty! We have SIGs, local sections, student chapters, conference organization teams, and Council; there are **tons of opportunities to demonstrate your leadership and have your voice heard!** There is no better way to network and meet people both in your area and outside your area than to volunteer. Come talk to me or anyone on Council to get connected and start giving back to CORS.

As a reminder, next year's CORS conference in **Saskatoon**, our first trip to the prairies! I am excited to bring my dogs and see if the "watch your dog run away for days" joke is true. I look forward to seeing all of you then!

Dionne Aleman



INCOMING PRESIDENT'S MESSAGE



Greetings Dear CORS Members,

I am delighted and humbled to serve CORS as the 2018–2019 President. I will do my best to keep up the momentum and upward trajectory set by my fellow CORS presidents. I would like to thank the outgoing President Dionne Aleman and the past president Fredrik Odegaard for their hard work and dedication to CORS for the last many years.

These are, as always, exciting times for our profession. More and more, companies are using data and quantitative modelling for their operational, tactical, and strategic decision-making. These companies come from many different industries, such as service, sports, entertainment, finance, and more. I think the future offers many interesting opportunities for operational research and analytics. In an attempt to capture this for CORS members, we are in the process of establishing a new special interest group (SIG) for analytics. If you are interested in learning more or joining this initiative, please contact Greg Paradis (UBC) or Wei Qi (McGill).

Our journal, *INFOR*, is going strong under the leadership of co-Editors-in-Chief Samir Elhedhli and Elkafi Hassini. Please consider submitting your papers to *INFOR*. Furthermore, do not hesitate to get involved with CORS, CORS council, CORS SIGs (forestry, queuing, healthcare, and soon analytics), competitions (student paper competitions, practice prize, SIG competitions), conference planning, and more. We need you!



This year's conference in Halifax was fantastic and once again big congratulations to all the organizers, volunteers and attendees. We will definitely remember the fabulous lobster dinner and walking on the sea bridge in Halifax! We look forward to our next conference in Saskatoon in late May in 2019!

I definitely have some big shoes to fill in this new role, and I am all ears for your comments and suggestions for moving our society forward.

Enjoy the rest of the summer!

Mehmet A. Begen

@CORS_President

COUNCIL CORNER

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

- Graduate student funding to attend the CORS annual meeting will increase from \$8,000/year to \$12,000/year starting at CORS2019.
- The number of pages per volume for INFOR will increase from 480 to 592 for 2018 onward.
- The CORS Service Award will be re-named the "Eldon Gunn Service Award" for 2017–2018 and onwards.

It's time to renew your CORS membership

Don't forget to renew your CORS membership for **April 1, 2018 to March 31, 2019**. You may be able to use an NSERC grant to pay CORS membership dues.

Renew your membership at this link:

http://www.cors.ca/sites/cors_php/en/membership/renewal.php

If you have any questions, contact Membership Services at members@cors.ca



CORS AWARD WINNERS

Congratulations to the winners of the awards and prizes presented at CORS 2018. Special thanks to all the participants and judges. Details on CORS awards and prizes, including a list of past winners, can be found on the CORS website www.cors.ca

Omond Solandt Award
Harold Larnder Prize
CORS Award of Merit
Eldon Gunn Service Award

Canadian Blood Services
John Birge
Mahmut Parlar
Anjali Awasthi and Fredrik Ødegaard

CORS Practice Prize

Florian Grenouilleau (Polytechnique Montréal)
Antoine Legrain, Nadia Lahrichi, Louis-Martin Rousseau
"A Set Partitioning Heuristic for the Home Health Care Routing and Scheduling Problem"

CORS Student Paper Competition Open Category: First Prize

Taghi Khaniyev (University of Waterloo)
"Spatial separability in hub location problems with an application to brain connectivity networks"

CORS Student Paper Competition Open Category: Honorable Mention

Gohram Baloch (University of Waterloo)
"UAV Service with Competition under Technological and Regulatory Limitations"

Rafid Mahmood (University of Toronto)
"Multiple Observations and Goodness of Fit in Generalized Inverse Optimization"

CORS Student Paper Competition Undergraduate Category: First Prize

Negin Bolkhanian and Matthew Reyers (Simon Fraser University)
"The Walking School Bus Routing Problem"

CORS Student Paper Competition Undergraduate Category: Honorable Mention

Craig Fernandes (University of Toronto)
"Evaluating NFL Game States using a Markov Reward Process"

Forestry SIG David Martell Student Paper Prize

Maha Ben Ali (Laval University)
"Configuration and evaluation of an integrated demand management process using a space-filling design and Kriging metamodeling"

Queueing Theory SIG Student Paper Prize

Jalal Khamse-Ashari (Carleton University)
"Constrained max-min fair scheduling of variable-length packet-flows to multiple servers"



HAROLD LARNDER PRIZE

John Birge

The Harold Larnder Prize is awarded annually to an individual who has achieved international distinction in operational research. The prize winner delivers the Harold Larnder Memorial Lecture, on a topic of general interest to operational researchers, at the National Conference of the Canadian Operational Research Society. Harold Larnder was a well-known Canadian in wartime OR. He played a major part in the development of an effective radar-based air defense 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.



CORS President Dionne Aleman (R) presents the Harold Larnder Prize to John Birge (L)

OMOND SOLANDT AWARD

Canadian Blood Services

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 founder and first chairman of the Defence Research Board (DRB). At various times in his life he headed the Science Council of Canada as a vice-chairman of Canadian National Railways (CNR), and Chancellor of the University of Toronto.



CORS Vice-President Mehmet Begen (R) presents the Omond Solandt Award



CORS AWARD OF MERIT

Mahmut Parlar

The Award of Merit is awarded to a present or past member of CORS in recognition of significant contributions to the profession of operational research.



Past Winner John Chinneck (L) presents the CORS Award of Merit to Mahmut Parlar (R)



ELDON GUNN SERVICE AWARD

Anjali Awasthi and Fredrik Ødegaard

The Eldon Gunn service award is presented to Members of the Society who have made outstanding contributions of time and service to the Society, at the national or local level, as conference organisers or as editors of CORS publications.

Eldon Gunn was a major contributor to the Society since the early 1980s and to Operational Research in Canada since the 1970s. He was one of the first recipients of the service award in 1987 after serving in Council and acting as conference chair for the 27th annual conference in Halifax in 1985. He went on to serve as president of the Society in 1991, and continued his service with passion up until his passing in 2016.



Holly Gunn (R) presents the Eldon Gunn Service Award to Anjali Awasthi (L)



Holly Gunn (R) presents the Eldon Gunn Service Award to Fredrik Ødegaard (L)



CORS PRACTICE PRIZE

Each year the Canadian Operational Research Society conducts a competition on the practice of operational research to recognize the challenging application of the OR approach to the solution of applied problems. The main criteria considered in evaluating submissions are project impact on the client organization, contribution to the practice of OR, quality of analysis, degree of challenge and quality of written and oral presentation.

First Prize

Florian Grenouilleau (Polytechnique Montréal)

“A Set Partitioning Heuristic for the Home Health Care Routing and Scheduling Problem”

The finalists

Florian Grenouilleau (Polytechnique Montréal)

“A Set Partitioning Heuristic for the Home Health Care Routing and Scheduling Problem”
with Antoine Legrain, Nadia Lahrichi, and Louis-Martin Rousseau

Krishna Teja Malladi (University of British Columbia)

“Development of a Decision Support Tool for Optimizing the Short-term Logistics of Forest-based Biomass” with Olivier Quirion-Blais and Taraneh Sowlati



Practice Prize Chair Mikael Rönnqvist (L) presents the CORS Practice Prize to Florian Grenouilleau (R)



CORS STUDENT PAPER COMPETITION

Each year the Canadian Operational Research Society conducts a student paper competition to recognize the contribution of a paper either directly to the field of operational research through the development of methodology or to another field through the application of operational research. The competition serves to showcase the high quality of OR education in Canada as well as the excellence of the new generation of operational researchers. Prizes are awarded in two categories: Undergraduate and Open. MBA students (and other specialized master students) are encouraged to participate in the competition in the open category with their applied projects.

Open Category

First Prize

Taghi Khaniyev (University of Waterloo)

“Spatial separability in hub location problems with an application to brain connectivity networks”

Honourable Mention

Gohram Balosh (University of Waterloo)

“UAV Service with Competition under Technological and Regulatory Limitations”

Rafid Mahmood (University of Toronto)

“Multiple Observations and Goodness of Fit in Generalized Inverse Optimization”

The finalists

Rafid Mahmood (University of Toronto)

“Multiple Observations and Goodness of Fit in Generalized Inverse Optimization”

Hootan Kamran (University of Toronto)

“Spatio-temporal clustering of multi-location time series to model influenza”

Taghi Khaniyev (University of Waterloo)

“Spatial separability in hub location problems with an application to brain connectivity networks”

Gohram Balosh (University of Waterloo)

“UAV Service with Competition under Technological and Regulatory Limitations”



*Education Chair Anjali Awasthi presents the
CORS Student Paper Competition
Open Category First Prize to
Taghi Khaniyev*

*Anjali Awasthi presents the
CORS Student Paper Competition
Open Category Honourable Mention to
Gohram Balosh (L) and Rafid Mahmood (R)*





CORS STUDENT PAPER COMPETITION

Undergraduate Category

First Prize

Negin Bolkhanian and Matthew Reyers (Simon Fraser University)
“The Walking School Bus Routing Problem”

Honourable Mention

Craig Fernandes (University of Toronto)
“Evaluating NFL Game States using a Markov Reward Process”

The finalists

Craig Fernandes (University of Toronto)
“Evaluating NFL Game States using a Markov Reward Process”

Negin Bolkhanian and Matthew Reyers (Simon Fraser University)
“The Walking School Bus Routing Problem”

Paul Jobinpicard and Logan Leblanc (Dalhousie University)
“Optimizing the Waste Collection System at Dalhousie University: A Stochastic Programming Approach”

Jessie Yeung (University of Waterloo)
“IMRT with the sliding window technique: An optimization model and demonstration”

The judges

Hossein Abouee-Mehrizi, Eman Almehdawe, Luis Antonio Santa Eulaliam, Mojtaba Araghi, Anjali Awasthi, Maciej Bukczynski, Timothy Chan, Daniel Haight, Houra Mahmoudzadeh, Martin Puterman, Ahmed Saif, Tamon Stephen, Jia Yuan Yu



Undergraduate Chair Stanko Dimitrov (R) presents the CORS Student Paper Competition Undergraduate Category First Prize to Negin Bolkhanian (L)



Stanko Dimitrov (L) presents the CORS Student Paper Competition Undergraduate Category Honourable Mention to Craig Fernandes (R)

CORS FORESTRY SIG

David Martell Student Paper Prize in Forestry

The David Martell Student Paper Prize in Forestry recognizes outstanding scientific contributions on the theory, methodology, and/or practice of operations research in the forestry/forest products industry. The competition is for the best student paper submitted, published, or accepted for publication in a peer-reviewed journal in the last two years.

First Prize

Maha Ben Ali (Laval University)

“Configuration and evaluation of an integrated demand management process using a space-filling design and Kriging metamodeling”

The finalists

Foroogh Abasian (Laval University)

“Forest bioenergy network design under market uncertainty”

Maha Ben Ali (Laval University)

“Configuration and evaluation of an integrated demand management process using a space-filling design and Kriging metamodeling”

Krishna Teja Malladi (University of British Columbia)

“Development of a decision support tool for optimizing the short-term logistics of forest-based biomass”



*Forestry SIG President Tassed Boukherroub (R)
presents the
CORS Forestry SIG David Martell
Student Paper Prize in Forestry to
Maha Ben Ali (L)*



CORS QUEUEING THEORY SIG Student Paper Prize

Jalal Khamse-Ashari

First Prize was awarded to **Jalal Khamse-Ashari** (Carleton University) co-supervised by Ioannis Lambadaris and Yiqiang Q. Zhao, with the winning paper titled “Constrained max-min fair scheduling of variable-length packet-flows to multiple servers”, published in *Annals of Telecommunications* in August 2017.

The selection committee members were Dr. Yiqiang Zhao (chair), Dr. Douglas Down, and Dr. Myron Hlynka.



*Queueing Theory SIG President Qi-Ming He (L) presents the
CORS Queueing Theory SIG Student Paper Prize to Jalal Khamse-Ashari (R)*

2018–2019 CORS BUDGET

Fiscal Year 2017/18 (01/04/2017 – 31/03/2018)

	2016–2017		2017–2018		2018–2019
	Budget	Actual	Budget	Actual	Budget
I. Revenues					
Membership Dues	40,000	29,433.33	30,000	32,404.98	20,000
Conference Profit	10,000	750	35,000	118,853.30	0
Conference Advance returns			47,300	47,300.00	20,000
Tax		1,471.67	1,500	1,620.25	1,500
Miscellaneous		140		1,618.63	
Total Revenues	50,000	31,795.00	113,860	201,797.12	41,500
II. Expenses					
Administrative Expenses:					
Administrative Support (Contract)	12,000	11,622.04	12,000	9,000.00	12,000
Supplies and Other Expenses	2,000	1,608.29	2,000	1,064.70	2,000
Translation services	2,500	2,462.91	2,500	1,934.50	2,500
Council Meeting	4,000	936.12	4,000	3,664.40	4,000
Sections Shares of Dues & shares	3,000	12,296.58	10,000	12,036.00	10,000
Sections Shares of Conference Profit	1,500	2,300.00	1,500	2,153.10	1,500
IFORS Subscription	500		500	527.56	500
Conference Expenses (Larnder, etc.)	3,000		3,000	5,377.00	3,000
2016 — Banff		800			
2017 — Quebec City		35,000.00			
2018 — Halifax		10,000.00		20,000.00	
Awards/Prizes for Competitions	3,600	2,800.00	3,600	2,800.00	3,600
Travelling Speaker Program	2,000	1,418.94	2,000	652.81	2,000
GST/HST	2,000		2,000		15,000
Bank and Credit Card Charges	1,000	1,481.81	1,000	1,437.10	1,000
Web Services	5,025		5,025	1,010.60	5,025
CORS Student Conference Funding	8,000	6,425.00	12,000	10,869.00	8,000
Unassigned					
Total Expenses	62,625	89,151.69	62,625	72,527.80	71,625
Total Revenues	50,000	31,795.00	113,860	201,797.12	41,500
Total Expenses	62,625	89,151.69	62,625	72,527.80	71,625
Revenues - Expenses		-57,356.69		129,269.32	-31,125

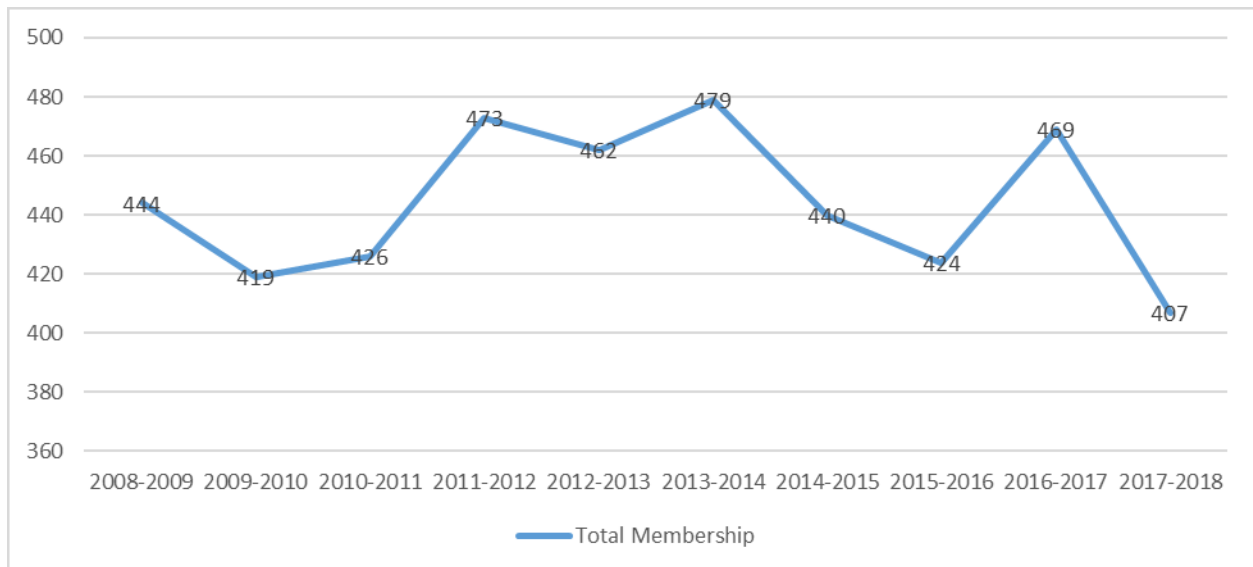


2017–2018 CORS MEMBERSHIP REPORT

I am pleased to submit a copy of the 2017–2018 Annual Membership Report of the Canadian Operational Research Society, which documents the membership activities experienced by the Society over the past year, for the consideration of CORS Council. 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 **decrease in membership in 2017–2018 of 13%**. These graphs summarize the report, which can be seen in full on the CORS website www.cors.ca

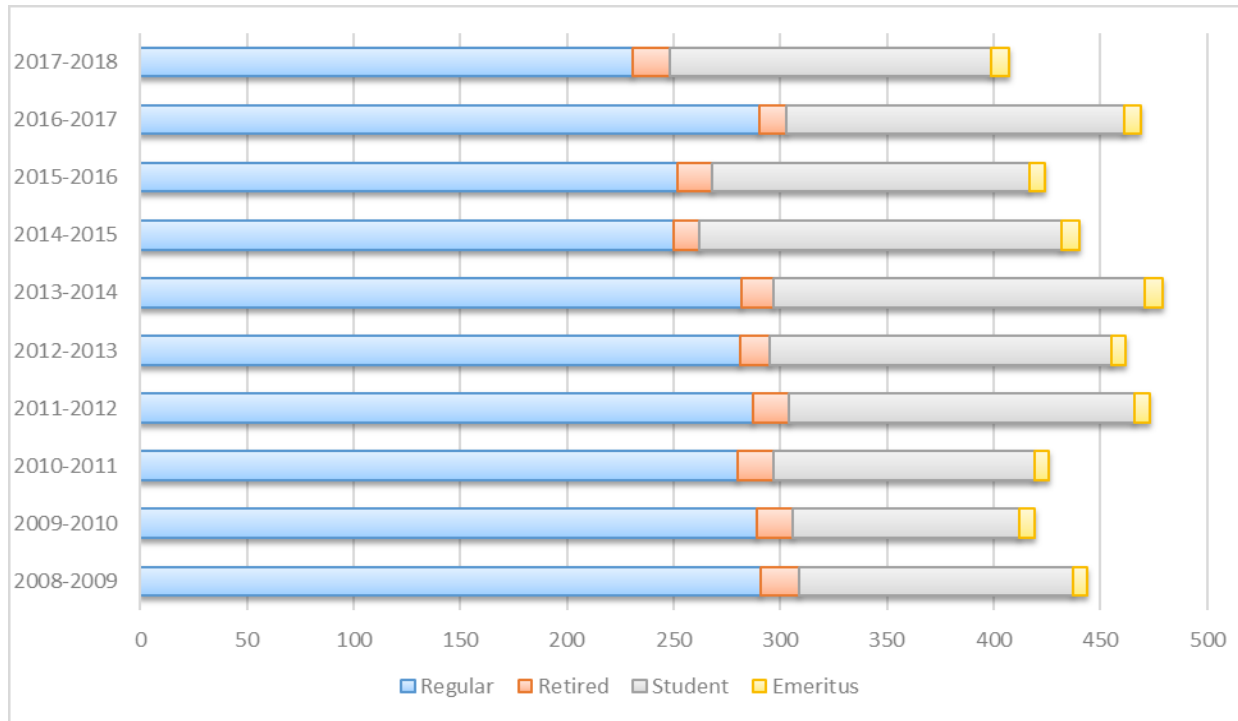
Erla Anderson, Membership Services Provider (members@cors.ca)

CORS Membership 2008–2018

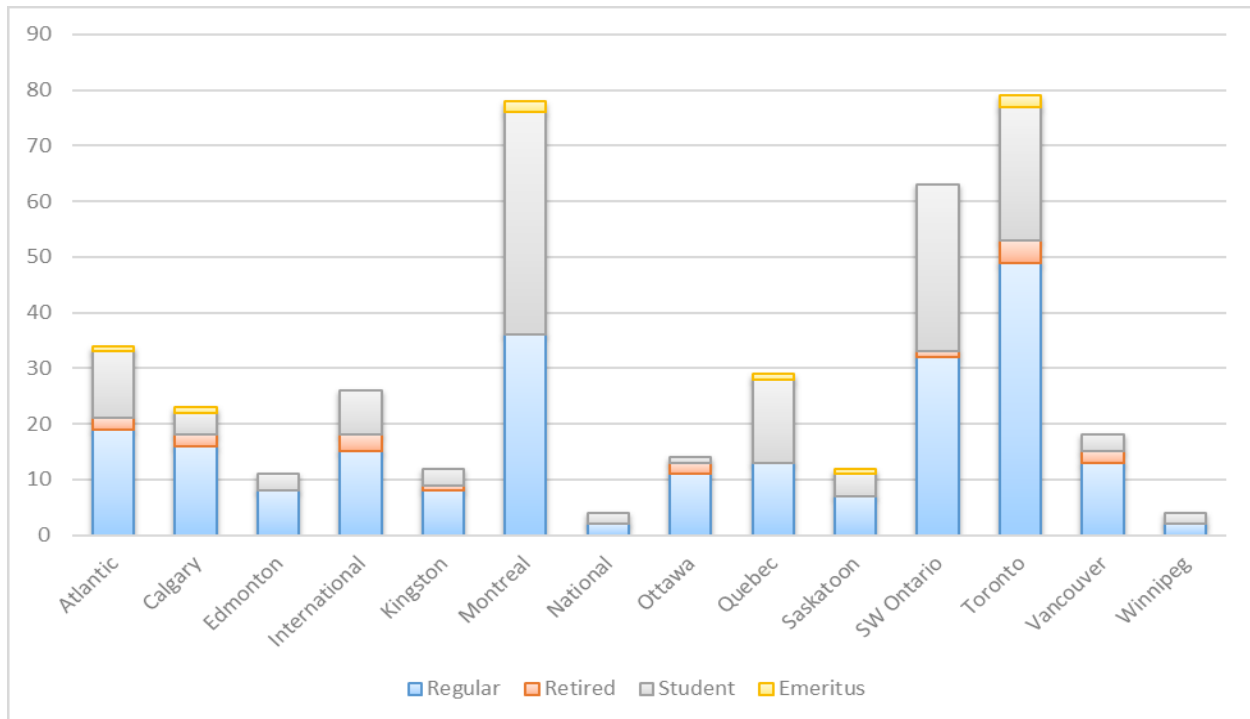




CORS Membership by Member Type 2008–2018



CORS Membership by Section and Member Type March 31, 2018



CORS CONFERENCE
May 27–29, 2019, Saskatoon, Sask.



CORS.



Canadian Operational Research Society 61st Annual Conference

SASKATOON, SASKATCHEWAN
2019

MAY 27-29,

SAVE the DATE!

On behalf of the 2019 Canadian Operational Research Society organizing committee, it is our pleasure to invite you to join us in stunning Saskatoon, Saskatchewan!

This lively urban hub is found on the banks of the South Saskatchewan River, surrounded by serene prairie grasslands and offering jaw-dropping horizons. As one of the sunniest cities in Canada, Saskatoon offers every opportunity to revel in its natural splendor, while the city's charming shops, local restaurants and public parks offer every modern amenity to the leisure seeker. Cruise the downtown and Meewasin Valley Trail on one of the complimentary hotel bicycles or explore the South Saskatchewan River via a river cruise.

A+

ABSTRACT SUBMISSIONS

Abstract submission open on
November 15th, 2018.

Sign-up to receive notifications!

S+

SPONSORSHIP OPPORTUNITIES

Sponsorship opportunities are
available contact

cors@eventsparexcellence.com

www.cors2019.ca



Stay Connected
Join our mailing list

CORS CONFERENCE
May 27–29, 2019, Saskatoon, Sask.



ANNOUNCEMENTS

CORS Emeritus Member

The status of Emeritus member of CORS is bestowed upon retired members who have received both the CORS Eldon Gunn Service Award and the CORS Award of Merit.

This prestigious designation is to acknowledge the member's significant contribution to the field of operations research and to CORS. This year's recipient is **Peter Bell**.



CORS FUNDING OPPORTUNITIES

Traveling Speakers Program (TSP)

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

Dionne Aleman, TSP Coordinator (aleman@mie.utoronto.ca)



CORS SPECIAL INTEREST GROUPS

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

SIGs formed so far include:

- **CORS Forestry SIG**
contact Tasseda Boukherroub (tasseda.boukherroub@cirrelt.ca)
École de technologie supérieure
www.cors.ca/SIG/Forestry
- **CORS Health Care Operational Research SIG**
contact Sonia Vanderby (sonia.vanderby@usask.ca)
University of Saskatchewan
www.cors.ca/SIG/HCOR
- **CORS Queueing Theory SIG**
contact Qi-Ming He (q7he@uwaterloo.ca)
University of Waterloo
www.cors.ca/SIG/Queueing

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

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

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

Stanko Dimitrov, SIG Committee chair (sdimitro@uwaterloo.ca)

Marco Bijvank, SIG Committee chair (marco.bijvank@haskayne.ucalgary.ca)



SIG NEWS

Queueing Theory

CORS Annual Conference, Halifax, 2018

The QT SIG organized five sessions for the CORS Annual Conference, Halifax, 2018. Thanks a lot to Dr. Opher Baron and Dr. David Stanford, who were the co-chairs for the Queueing Theory cluster.

Queueing Theory Student Paper Prize

The winner of the Sixth CORS Queueing Theory SIG Annual Student Paper Prize is Mr. Jalal Khamse-Ashari from Carleton University, co-supervised by Ioannis Lambadaris and Yiqiang Q. Zhao. The prize was given out at the CORS Annual conference in Halifax, June 2018.

Title: Constrained max-min fair scheduling of variable-length packet-flows to multiple servers

Journal: Annals of Telecommunications Journal in August 2017

Abstract: This paper contains original work of high quality, in which novel results on multi-server fair queuing in a heterogeneous environment have been developed. The paper targeted a challenging area of research with great applicability in computer and communications networks, such as cloud computing. The paper identifies important shortcomings in a well-known algorithm recently proposed by researchers from the Stanford University. To address this problem, a new multi-server fair queuing algorithm which extends the so-called Deficit Round Robin (DRR) algorithm is proposed to achieve max-min fairness in such a constrained multi-server queuing system. The paper presents a solid mathematical approach and provides a sound description of its collocation with respect to existing work.

CanQueue 2018

CanQueue 2018 will take place in Edmonton, August 17–18, 2018 (<https://sites.google.com/view/canqueue2018/>).

Thanks to Dr. Armann Ingolfsson. CORS members are cordially invited to attend the conference. A special event to honor Dr. Winfried Grassmann for his 80th birthday will take place during the meeting. Please contact Dr. Ingolfsson for information about the conference and the special event.



MEETINGS AND CONFERENCES

CORS Business Meetings

June 6, 2018	CORS Council Meeting, Halifax, N.S.
August 10, 2018	CORS Council Meeting, Teleconference
November 2, 2018	CORS Council Meeting, Teleconference
January 18, 2019	CORS Council Meeting, Toronto, Ont.
March 8, 2019	CORS Council Meeting, Teleconference
April 12, 2019	CORS Financial Planning Committee Meeting
May 10, 2019	CORS Council Meeting, Teleconference
May 26, 2019	CORS Council Meeting, Saskatoon, Sask.
May 27, 2019	CORS Council Meeting, Saskatoon, Sask.
May 28, 2019	CORS Annual General Meeting, Saskatoon, Sask.

Other Conferences

August 17–18, 2018	CanQueue 2018, Edmonton, Alta. https://sites.google.com/view/canqueue2018/
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CORS Annual Conferences

May 27–29, 2019	CORS Annual Conference, Saskatoon, Sask. https://www.cors2019.ca/
2020	CORS Annual Conference, Toronto, Ont.
2021	CORS Annual Conference, TBA
2022	CORS Annual Conference joint with INFORMS Intl., TBA

WWW Conference Listings

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



THE NEXT ISSUE

The next issue of the Bulletin is scheduled to appear in **November**. Along with the regular features and news from the local sections, it will include more information about the next CORS conference. Contributions to this issue, especially news on the activities of local sections or CORS members, should be submitted by **October 19, 2018** 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 members@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.



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Website: www.cors.ca

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

Twitter: @CORS_President