Danish Operations Research Society (DORS)
General assembly June 23, 2020

President report, year 2019-2020

This year COVID-19 pandemic has impacted all of our lives. Many of us have been forced to work from home, and some might have also lost their jobs. To the latter goes our sympathy and we hope that the DORS network can be of some help. The board will forward you any relevant job postings that are sent to us.

From an academic perspective, the COVID-19 has respawned the interest in the use of operations research for emergency services in Denmark. At the University of Southern Denmark (SDU), Prof. Kannan Govindan has published an article on decision support tools for healthcare supply chains considering epidemic outbreaks. At the Technical University of Denmark (DTU), Prof. David Pisinger and Assoc. Prof. Evelien van der Hurk, have started a project that analyses complex social networks to better support decision-makers on contact restriction during epidemic outbreaks. They were hosted for a live chat on the DR website about their project. For me, this was the closes that operations research has gotten to the general public.

Events/meeting
A direct consequence of COVID-19 for DORS has been the cancellation of our annual conference, Applications Of Optimization (AOO) 2020. The event had lined up 4 great speakers: Anita Schöbel (Fraunhofer Institute for Industrial Mathematics/TU Kaiserslautern), Marco Lübbecke (Aachen University), Henrik Caroe Bylling (IKEA) and Niels-Christian Fink Bagger (Novo Nordisk). I would like to thank David Franz Koza and Nicolai Idel for all the hard work they put on organizing the conference.

AOO 2019 was, however, successfully held on the 6th of May at Industriens Hus in Copenhagen. The conference featured Magrét Vilborg Bjarnadóttir (Robert H. School of Business Maryland, USA) giving a presentation on the use operations research for people analytics, Fernando Alvarez (Bunker Metric, Oslo Norway) showed how Bunker Metric helps optimizing marine fuel procurement, Dolores Romero Morales (Copenhagen Business School) gave a lecture on the use of operations research in data science, and Torben Barth (Fraport, Frankfurt Airport) explained how analytics is used at Frankfurt Airport. I would like to thank Mosek, Ørsted, and EURO for sponsoring AOO 2019, and Line Reinhardt and Nicolai Idel for organizing this great event.

This year's company visit was hosted by Qampo/Trapeze in Aarhus on the 31st of October. The host organized an impressive visit where 4 experts presented AI and OR methods for

public transport, debated on the challenges of customer acceptance and business models for OR companies.

A great day was also organized for the annual OR Days at Aarhus University on the 3rd of October. Four companies and public agencies (Aarhus Kommune, BESTSELLER, AGCO and LEGO) showed to all the participating students how OR and Analytics can be applied in practice. And judging by the number of new members that registered with DORS, they must have made a great impression. OR Days at DTU has not been held due to the COVID-19 crisis.

Members and membership
DORS has currently 349 active members of which 199 are private members, 109 are student members, 12 are company members, 7 are institute members and 2 are honors members.

ORbit
Julia Pahl has had her first year as editor of ORbit. Even though finding contributors for the magazine is not an easy task, Julia has managed to produce two ORbit issues: ORbit 32 and ORbit 33. Recently ORBit 34 was also published electronically as it was not possible to send a physical copy with the restrictions imposed by the COVID-19 crisis.

In order to keep having an interesting and informative magazine, I would like to use this opportunity to ask both members and non-members to send contributions for ORbit. The aim of ORbit is to publish popular science articles about OR in an easy to understand language. The content of the articles can be broad and span from the latest research contribution to a general description of how OR is used in the industry. Small articles (up to one page) are rewarded with 500 DKK while longer contributions will receive 1000 DKK. The reward price is fixed and it is independent of the number of authors. This practice was introduced in ORBit 20 in an attempt to increase the number of submitted articles. It is hard to say if this has worked, but so long as the economy of DORS allows it, it has been decided to proceed with this practice.

DORS prize
The master theses nominated for the DORS prize 2019 was again this year of very high quality. This year the committee consisted of Associate professor at Aarhus University Simon Emde, Senior System analyst at Energinet PhD Mette Gamst and Associate professor at Roskilde University Line Reinhardt. The committee selected the thesis by Peter Emil Tybirk "Reinforcement Learning for Combinatorial Optimization with Application to the Fixed Charge Transportation Problem" from supervisor Andreas Klose to be awarded the prize due to the novelty of the method, the generality of the method and the competitive results on a very challenging problem. Peter Emil Tybirk had a nice presentation of the discoveries of the thesis in the online general assembly meeting on the 23rd of June.

Website
The past year has seen what we hope to be the end of the issues with the DORS website. For many years the DORS website has been plagued by hacking, which has resulted in DORS effectively not having a reliable website. During this year we have moved the website to a static based system, which should solve most of our cybersecurity problems. The website is

now up and running and we are actively using it to promote our events and publish news about DORS.

The DORS Fund
The economy of DORS is stable and we have quite some capital in our account. Being a nonprofit organization, we want to make sure that the money we have are been given back to our members in the form of events and services. The board has thus raised the idea of creating a DORS Fund, which all our members can apply for. Already this year we have supported the EURO summer school on Data-Driven Decision Making and Optimization and offered 2 scholarships to our members. It will, however, be up to the new board to finalize the guidelines for using the DORS Fund. It is our hope that this fund can help increase the interest of OR in Denmark and increase the visibility of our OR scientist and practitioners internationally.

Vision for the future
A future activity that the current board has been working on is the establishment of lifelong learning activities. The board vision is to keep alive our members' interest in operations research by offering a series of single-day courses we call DORS Tutorials. The idea is to organize a half or full-day workshop event with a central topic. In the coming year, we will be organizing the first DORS Tutorial which will be an introduction to the topic of reinforcement learning. The event is partially funded by EURO (the Association of European Operational Research Societies) and will take place in the fall of 2020.

DORS, in collaboration with DTU, is also discussing the idea of organizing the EURO conference in Denmark and will most likely prepare a bid this or next year.

To conclude, I believe that DORS 2019-2020 has been a great year of successful events and new initiatives. It was unfortunate that the year concluded with the cancellation of the general assembly and of AOO 2020, but I am sure we will all have a chance to network again soon. You can already save-the-date for the 3rd of May for AOO 2021!

Yours sincerely

Dario Pacino
The president of DORS