

## Letter From the President

Dear Reader,

Operations Research (OR) applies Mathematics, Statistics and Computer Science to build models that identify optimal strategies and policies. OR has an abundance of application areas, including logistics, transportation, health-care, business strategy, marketing, military and manufacturing.

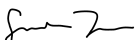
While the diverse range of application areas for OR is a strength of the field, it is easy for undergraduate students to feel disconnected from practical applications. The undergraduate OR program at SFU has two classes where students are able to learn more about the larger picture of what the process of problem solving using OR can look like. They provide space for students to be creative about what kind of problem to solve and how to solve it, and to develop practical project skills like creativity, and communication. The first course, "MATH 208W: Introduction to Operations Research" gives an overview of what OR is, some general modelling approaches, and has a one to two month long final project. In "MATH 402W: Operations Research Clinic" students draw from the technical knowledge of other courses and spend the entire semester (three months) on their projects. In both courses, students work in teams to propose a problem, research an OR solution, and present their results.

This is the fifth edition of Analytics Now, a journal of high-quality student work from the 208W and 402W classes. It aims to celebrate OR undergraduate research achievements, to provide practical inspiration for future work, and promote the OR program. When I took 208W and 402W, The older editions of Analytics now were a really valuable resource for me.

In this edition we have a diverse range of OR projects, all with local applications. In papers from 2017, Bi and Gusev consider optimizing Vancouver snow plow routes, and Jiang, Lu, Siu, Tong and Yin consider optimizing Surrey school infrastructure planning. In 2018 papers from 208W, Basnayake, Kim, Lee and Lu propose an optimization model for scheduling SFU's exams, and Jace, Wong, Xu and Zita propose optimized station locations for Surrey Light Rail Transit. Lastly, from 402W in 2018, Bolkhanian and Reyers introduce the problem of optimizing walking school buses, and Bi, Dallow and myself optimize nurse schedules in collaboration with a local health centre.

All these papers are now available on <http://journals.lib.sfu.ca/index.php/analytics-now/index>. We would like to extend our gratitude to Dr. Tamon Stephen for all his support and guidance. I would also like to thank the previous presidents and editors for their hard work to establish the foundation of the Analytics Now journal. I hope that you will enjoy reading these papers, that they may spark some inspiration for new applications of OR or new approaches to problem solving.

Best,



Samantha Zimmerman: ORSU President (Sept 2017 to April 2019)