

## Preface

By: Dr. Tamon Stephen

I am happy to see three high quality projects in this third edition of Analytics Now. These projects are the products of our Introduction to Operations Research (MATH 208W) and capstone Operations Research Clinic (MATH 402W) courses.

In the Clinic, the team of Beddis, Mitrovic and Sharma present a case study on selecting station locations for a public bike sharing program. They focus on building a network suited to handling the final stage of a commuter's transit. This allows them to formulate the problem as a deterministic integer program. As part of this, they developed criteria for station placement, and a detailed map of potential locations in downtown Vancouver.

This project was honoured by being selected as a finalist in the Canadian Operational Research Society's (CORS) Student Paper Competition held at the CORS/INFORMS International Meeting in Montréal, in June 2015.

In the introductory course, the paper of Baillet, Dallow, Pham and Shen compare several management plans for water distribution in Metro Vancouver. They quantify how different adaptations to the distribution system, such as connecting existing reservoirs, can help to meet forecast demand, via a linear program. This subject turns out to be quite topical, as 2015 has been unusually dry and water use restrictions are in effect across this region.

The paper of Cesaretti, Tominaga, Zimmerman and Reyers examines an airline scheduling problem for a single type of aircraft available between seven major Canadian cities. Their model incorporates capacities, costs, demands and prices, and allows them to evaluate scenarios where airline operations are impaired.

I thank the members of Simon Fraser University's Operations Research Student Union (ORSU) for their efforts in publishing the nice work of our undergraduate students. And I thank the authors for their hard work, and allowing their projects to appear in this volume. I look forward to seeing more of these projects in the coming academic year and beyond.