

Due: Thursday, February 10th (draft) and Thursday, March 3rd (final) (before class)

This article review is the only task in Math 402W that will be done individually, rather than in teams. The objective is for the student to learn about successful applications of Operations Research (or Analytics) while honing their technical writing skills.

Each student will choose a research article that describes an application of Operations Research. Students are required to consult with the instructor about the selection, with the goal of having papers selected by **Tuesday, February 1st**. Each student should present a different article, and articles will be assigned on a first-come, first-served basis. Please contact the instructor when you have a suitable candidate article.

The suggested source of the article is the Journal of the Operational Research Society. This journal publishes papers that focus on significant applications of Operations Research that require the use of serious scientific methods. You should use an article that describes an operations research project that has been successfully implemented in the field using real data. Note that if you are off-campus, you will need to access JORS through the SFU library using student Internet credentials. Scientific articles from other sources may also be considered on a case-by-case basis. The article should have been published within the last ten years.

The review that you will produce should be at most 1200 words and fit on two pages (one double sided page) using reasonable margins and an 11- or 12-point font. It should describe the contents of the article **in your own words**.

Your review should be clearly organized, and should address the following issues:

1. What real-world problem is treated in the paper?
2. What type of mathematical (Operations Research) model is proposed to solve the problem?
3. What mathematical tools are used to solve the model? How well is it solved?
4. What are the limitations of the model?
5. How has the solution been implemented? What is the impact of the implementation?
6. What are possible future directions for this work? For instance, can the model be improved? Can it be applied elsewhere?

Particularly on points 4 and 6, you are encouraged to go beyond the contents of the paper, and include your own critical analysis.

A draft grading rubric is on the back of this page.

You will submit an initial version of this review on Thursday, February 10th. These will be graded and returned with feedback. The feedback will then be incorporated and the review resubmitted.

Draft grading rubric:

The problem is correctly identified and clearly presented. (15%)	
The mathematical model is identified, including descriptions of key variables (input) and predictions (outputs). (15%)	
There is a high-level explanation of how the model is solved. (10%)	
Limitations of the model (i.e. critical, and perhaps debatable assumptions) are explained. (15%)	
The implementation and impact are discussed. (10%)	
Recommendations for improvements and further work are proposed and worthwhile. (10%)	
Ideas are presented clearly and logically. (15%)	
Few grammatical, spelling and punctuation errors. (5%)	
The paper is well-formatted, including references. (5%)	