Editorial

I almost cannot believe that I am writing the editorial for the second issue of 2015. This year has flown by, with a lot of activity in the operations research community of South Africa. ORiON has kept up with this activity and therefore this issue contains three interesting and diverse papers. It spans the topics of stock keeping unit (SKU) assignment, optimal sharing of fiber ducts and a novel algorithm for a special type of cutting stock problem.

The first paper is authored by Jason Matthews and Stephan Visagie. The paper is titled "SKU assignment to unidirectional picking lines using correlations." The authors consider an order picking system consisting of unidirectional picking lines. A possible approach to assign SKUs to these picking lines is to group orders with a lot of stores in common on the same picking line. A phased insertion heuristic is presented that uses correlations (in the form of shared stores) to group SKUs on the picking lines. The approach was applied to real life data and a saving of 20% relative to historical assignments was achieved. I would like to thank the associate editor, Prof Wim Gevers, for handling the review process of this paper.

The second paper by Tjaart Steyn and Giel Hattingh is titled "An exact algorithm for the N-sheet two dimensional single stock-size cutting stock problem." In this paper Tjaart and Giel present an algorithm to optimally solve the N-sheet two dimensional single stock-size cutting stock problem. This algorithm generates sets of patterns in a sequential way. For each set found, an integer program is solved to produce a feasible, or if possible, an optimal solution to the N-sheet problem if possible. If a feasible solution cannot be identified, the waste acceptance tolerance is relaxed somewhat until solutions are obtained. The cutting sets are then analysed for optimality criteria developed in the paper. This algorithm performs well when applied to known test sets.

The final paper is titled "Heuristic approach to the passive optical network with fiber duct sharing planning problem" and is authored by Samuel van Loggerenberg, Leenta Grobler and Fanie Terblanche. In this paper the authors solve the very interesting problem of determining the least cost way to lay optical fibers in the telecommunication industry. They present a heuristic that produces promising results when applied to real life data sets. The heuristic could find solutions within a 3% optimality gap at a fraction of the time needed for integer programming formulations.

I want to extend a big thank you to the three major parties involved in publishing ORiON. The first two parties are the authors and the reviewers. Without authors choosing ORiON as their publishing vehicle and reviewers that contribute countless hours to the standard of ORiON it would not be possible to have ORiON. The third party is the editorial staff of ORiON. Thank you to Martin Kidd and the typesetting assistant Elmien Thom for performing outstanding jobs in respectively handling the management of ORiON and the typesetting of papers in LaTeX.

I want to encourage subscribers and readers of ORiON to seriously consider ORiON as a vehicle to publish their quality research. We offer a quick turnaround time and are accredited at the Department of Higher Education and Training for research subsidy.

My best wishes to all the authors, reviewers, subscribers and readers of ORiON for the coming festive season. I hope you will enjoy reading this issue of ORiON. May 2016 be a prosperous year!

Stephan Visagie
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