

# *Editorial*

This first issue of ORiON Volume 27 contains three interesting papers. Readers of ORiON have become accustomed to papers ranging over a wide spectrum of operations research topics — this issue is no exception.

The first paper, titled “Cross-impact analysis experimentation using two techniques to revise marginal probabilities of interdependent events”, by Maredi Mphahlele, Oludayo Olugbara, Sunday Ojo and Derrick Kourie considers a Monte Carlo based approach as well as a difference equation approach to revise marginal probabilities of interdependent events. The paper shows that the expected impact rankings of interdependent events may indeed depend on the technique used for revising event marginal probabilities. They conclude that both methods generate a world view closer to that of the decision maker, but that the Monte Carlo based approach generates the closest view of the two.

The second paper by Darian Raad, Anton Sinske and Jan van Vuuren is titled “Water distribution systems design optimisation using metaheuristics and hyperheuristics.” In this paper multi-objective metaheuristics and hyperheuristics for the difficult problem of water distribution systems (WDS) design is presented. The authors present numerous modern metaheuristics, including multi-objective evolutionary algorithms, an estimation of distribution algorithm and a recent hyperheuristic named AMALGAM (an evolutionary framework for the simultaneous incorporation of multiple metaheuristics) to solve benchmark instances from literature of the problem. In total twenty-three algorithms are applied and results thereof reported. The top performing algorithms in terms of the various performance metrics used are NSGA-II, TAMALGAM<sub>J<sub>ndu</sub></sub>, TAMALGAM<sub>ndu</sub> and AMALGAMS<sub>ndp</sub> (the last three being novel variants of AMALGAM). However, for a very large real-world benchmark, the AMALGAM paradigm outperforms NSGA-II convincingly, with AMALGAMS<sub>ndp</sub> performing convincingly the best overall.

The final paper, by Dag Ericsson, is titled “Demand chain management — The evolution.” It highlights the evolution of the concept of demand chain management (DCM) from supply chain management (SCM). Traditionally SCM was managed within a company with a stronger focus on the suppliers. This paper maps out the evolution of a DCM approach that focuses much more on the customer, or demand side of the chain. Furthermore, the chain starts expanding out of the traditional company borders, with outside partners that contribute to the customer’s perceived value of the product. A number of new ideas and developments in SCM and DCM are discussed, such as the movement away from the chain concept to that of a network concept. The conclusion is that the future would hold an integrated and aligned chain built on partnership and mutual interdependence aiming at creation of a unique competence to identify and satisfy customer perceived value.

Eight authors contributed to this issue of ORiON. I would like to convey my thanks to these authors for supporting ORiON by submitting their work for publication. My sincerest thanks also go to the referees who contributed selflessly to this issue of ORiON. Referee reports have led to substantial improvements in the quality of papers in most of the cases. Without the authors and referees it would be impossible to publish papers on time and of high quality in ORiON.

Jan van Vuuren did the final proofreading of the papers for this issue. His recommendations increased the quality of all the papers. I would like to convey my thanks to him for his time and input. The exceptional high quality of his feedback on papers is invaluable.

I would also like to convey my sincerest thanks to Martin Kidd, the journal manager, and Anton de Villiers, the typesetting assistant. Both of them are performing an excellent and professional job at respectively handling the administration and typesetting of ORiON. Without their help and dedication the publication of ORiON would be near impossible.

Authors of new submissions are requested to use ORiON's online submission system. It is currently available at [www.orssa.org.za/ojs](http://www.orssa.org.za/ojs). Not only does it ease the administrative burden of the editorial team, but authors can track the refereeing process of their submitted papers on the online system. Referees can also register and complete their referees' reports on this online system. Please contact the journal manager, Martin Kidd, if you need any assistance to use this new facility.

I hope that the range of papers included in this issue will contain something of interest to all of ORiON's readers. Readers are welcome to contact to editor-in-chief with any recommendations or suggestions on the publication of ORiON.

Stephan Visagie  
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