# A GreedyZero algorithm to minimise the conflicts in an Optical Multistage Interconnection Network

## ABSTRACT

An Optical Multistage Interconnection Network (OMIN) is an important class of Interconnection Network that has large transmission capacity in the communication networks. One of the severe problems is the conflict which is caused through coupling two signals within switching elements. In this paper, we have proposed a new algorithm to minimise the number of conflicts of OMINs using the greedy graph colouring and Zero algorithm. The greedy graph colouring approach employed the Zero algorithm to categorise inputs of the OMINs without conflict. The results showed that the number of passes reduced by approximately 30%. In addition, the average execution time of our proposed algorithm was less than the average execution time of the Zero algorithm.