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# Review on Meta-heuristics Approaches for Airside Operation Research

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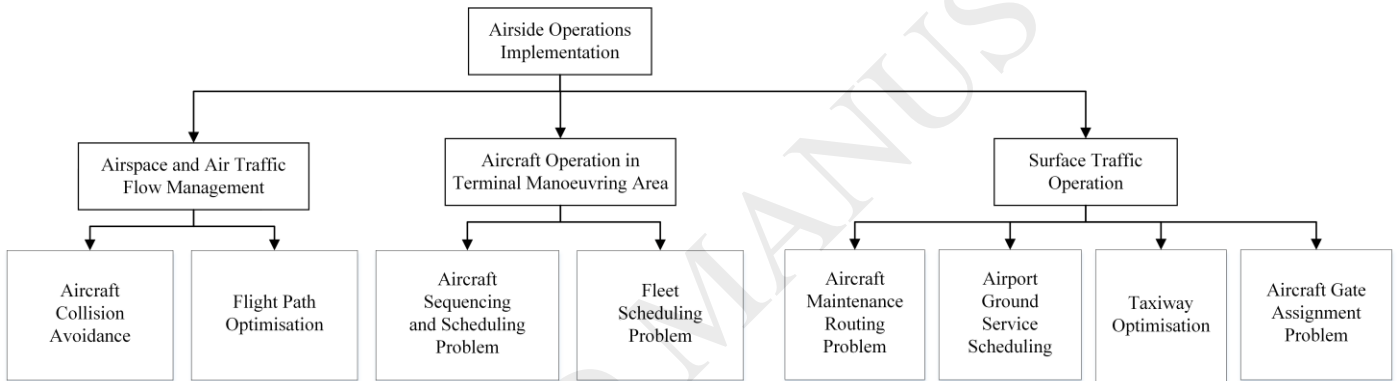
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## Graphical abstract



## Highlights

- The review synthesises the abundant research areas in airside operation research.
- Classification of airside operation research using meta-heuristics is proposed.
- This study identifies the latest challenge and research in air transport.
- Future research directions in modelling and algorithm customisation are identified.
- The contemporary research for airside operation in meta-heuristics is addressed.

## Abstract

The number of publications related to airside operation research is increasing and gaining in popularity. This paper aims to provide researchers with a comprehensive and extensive overview of meta-heuristics application for aviation research, with a particular focus on the airside operations. The scope of airside operation research covers airspace and air traffic flow management, aircraft operation in the terminal manoeuvring area and surface traffic operation. Based on the recent publications related to airside operations, the meta-heuristics approach is a promising approach to enhance the computational efficiency and achieve higher applicable in various decisions in airside operations. However, the literature on airside operation research is quite disjointed and disparate. Therefore, a general taxonomy framework for the airside information system is proposed in order to classify the research systematically and expedites related research and development of engineering applications in the aviation industry. To the best of our knowledge, this is the first review of the field using the meta-heuristics approach. The prominent findings of recent

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