

The Maritime Inventory Routing Problem under Uncertainty

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Maritime transportation is the most common way of transporting goods between distant places. However, it is highly affected by several uncertainty factors such as weather conditions and mechanical failures. Hence, the uncertainty inherent to several parameters, like the arrival times of the vessels, must be taken into account when solution methods are designed.

There are several approaches to deal with uncertainty, namely, stochastic programming, robust optimization, risk measure based models and safety stocks models. All these approaches have pros and cons and, in this talk, we are going to analyze them in the context of a maritime inventory routing problem.

References

- [1] RODRIGUES, FILIPE; AGRA, AGOSTINHO; HVATTUM, LARS MAGNUS; CHRISTIANSEN, MARIELLE; REQUEJO, CRISTINA, *Comparing techniques for modelling uncertainty in a maritime inventory routing problem*, European Journal of Operational Research, 277(3), 831-845 (2019).

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