

A comparative study of linear programming and nonlinear programming models of the ship speed optimisation problem in maritime transportation

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Abstract

The performance of the widely used nonlinear programming model of the ship speed problem in maritime transportation is compared with the performance of the hardly employed linear programming model, originally developed by Brown et al. (2007). The comparison basis employs a case study, namely that of the SEAFIGHTER patrol boat of the US Navy. Results obtained by the computational implementation of the linear programming and nonlinear programming models in the LINGO demonstrate that the performance of the nonlinear programming model is inferior to that of the linear programming model.

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