

Dear Editor,

We the authors wish to sincerely thank the reviewers for their valuable comments concerning our paper. We addressed the comments raised by reviewer #2 in the following.

We believe this new version of the manuscript is more suitable for publication and we hope to meet the standards of Operation Research Perspectives.

Sincerely,

Pedro B. Castellucci

Franklina M. B. de Toledo

Alysson M. Costa

Reviewer #1:

- I continue recommending the acceptance of the document. They have improved the weakness part of the paper and they have answered the questions and comments of the referees.

We thank the reviewer for the comments raised throughout the process, they were valuable for increasing the quality of the paper.

Reviewer #2:

The paper is improved since previous submission, given that many suggestions of reviewers have been accepted and embedded in the new version of the paper.

Some further comments:

- Section 4, line 160. "For this we generate two set of instances." Then I expected I brief description of these sets.

The reviewer is right, adding a brief description of the sets makes the text more readable. The manuscript now reads:

For this, we generated two sets of instances the first based on instances proposed by Ivancic et al. [1989] and the second based on Bischoff and Ratcliff [1995] and Davies and Bischoff [1999] (Subsection 4.1).

- Table 2. The occupation ratio for this family of instances is very low (for the classical Container Loading Problem it is greater than 90%). Comment this result: what is the reason? Is it the packing heuristic? Why the results are worse than those of Table 1?

We agree with the reviewer that this difference in quality should be commented more explicitly. The instances related to the results in Table 2 (BR) are harder to solve. BR instances can fit a higher number of boxes inside the container (relative to IMM instances). The manuscript now reads.

The average occupation for the BR-TAC instances was lower than the ones from IMM-TAC (see Table 2). This could be associated with the number of boxes in the instances. BR-TAC instances can fit a higher number of boxes inside the container, this leads to harder to solve instances of the models [Silva et al., 2019].

- It is not clear the time limit for the experiments.

We thank the reviewer for the careful reading. Indeed, the way we reported the time limit in Subsection 4.2 could be misinterpreted and we had failed to report the computational time in Subsection 4.3. We clarify and add these information, respectively. The manuscript now reads:

Therefore, to validate our framework, we solved each container loading sub-problem, associated with \mathcal{E} (and $\bar{\mathcal{E}}$), of the dynamic programming with the time limit to five seconds to find a solution for each of the sub-problems related to V_t , $t \in \mathcal{T}$.

and,

(...) each run of the simulation takes less than a second.

- I really appreciate the fact that authors have made available datasets, results and even the source code. I

suggest to add also a script that validates a solution, in order to avoid misunderstandings of the problem and encourage other researchers to work on it and compare results.

We thank the reviewer for the suggestion. We also added a script to verify the feasibility of solution files.

Reviewer #4:

- The authors have addressed all the comments I raised during my first round of revisions. In my opinion, the paper can now be accepted for publication.

We thank the reviewer for the comments raised throughout the process, they were valuable for increasing the quality of the paper.

References

- Eberhard E. Bischoff and M. S. W. Ratcliff. Issues in the development of approaches to container loading. *Omega*, 23:377–390, 1995.
- A. Paul Davies and Eberhard E. Bischoff. Weight distribution considerations in container loading. *European Journal of Operational Research*, 114:509–527, 1999.
- Nancy Ivancic, Kamlesh Mathur, and Bidhu B. Mohanty. An Integer Programming Based Heuristic Approach to the Three-dimensional Packing Problem. *Journal of Manufacturing and Operations Management*, 2: 268–289, 1989.
- Everton Fernandes Silva, Túlio Angelo Machado Toffolo, and Tony Wauters. Exact methods for three-dimensional cutting and packing: A comparative study concerning single container problems. *Computers and Operations Research*, 109:12–27, 2019.