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# A multiobjective bilevel approach based on global-best harmony search for defining optimal routes and frequencies for bus rapid transit systems

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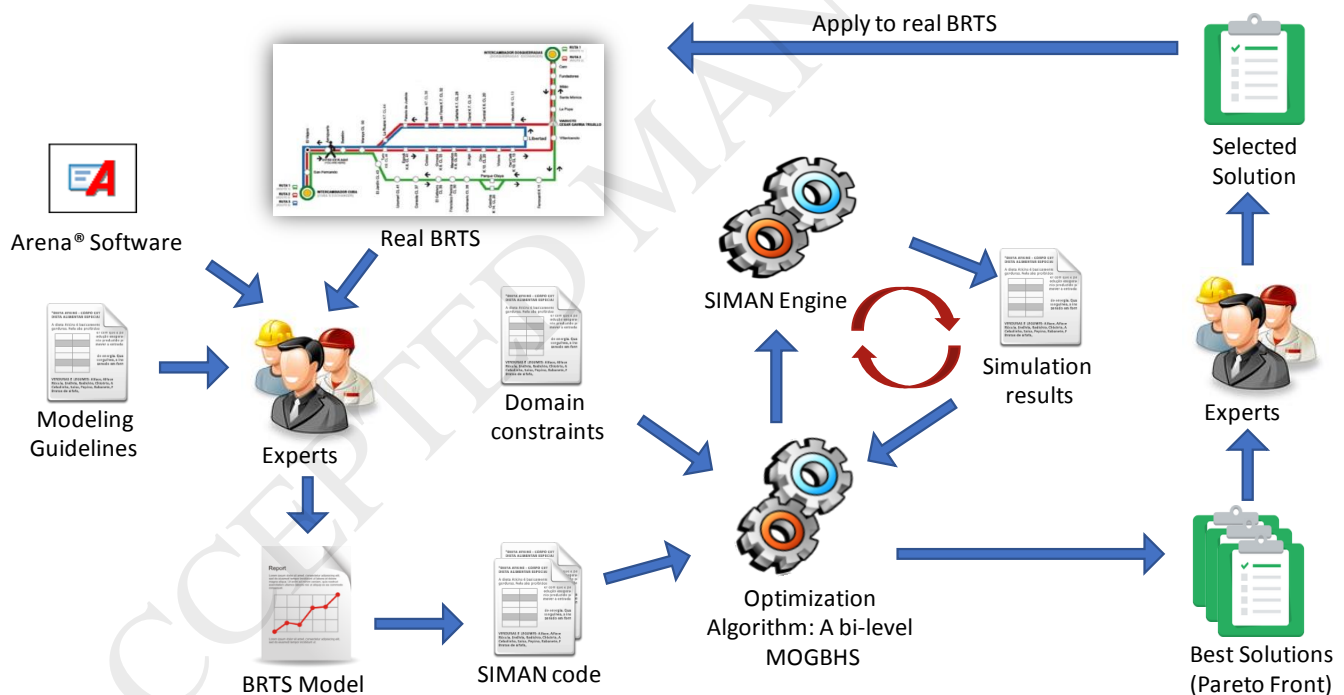
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## Graphical abstract



## Highlights

- A new multi-objective optimization algorithm called MOGBHS is presented
- MOGBHS is based on Global-best Harmony Search, Pareto front and crowding distance
- An original solution for the Transit Network Design and Frequency Setting Problem is putting forward
- Discrete events simulation was used to evaluate the fitness of solutions (harmonies)
- MOGBHS outperforms results of NSGA-II in a real BRTS

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