



UNIVERSITAT POLITÈCNICA
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Critical review of “Hybrid optimization methods”

SUBJECT:
COMUNICACION SKILLS 1

ASSIGNAMENT:	Critical review
DATE:	11/01/2019
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The presentation was named hybrid optimization methods and offers a review of the different methods and concepts that exist to do an optimization. The review includes an introduction and description of optimization concepts, deterministic optimization, evolutionary optimization, hybrid genetic algorithms and some examples.

The presentation explains the main concepts of optimization and give an introduction that how are used these parameters in the normal optimisation. Then explain the two main algorithms of optimization and use this information to introduce the different genetic algorithms and the hybrid genetic algorithm.

This presentation doesn't have the objective to present a results or conclusions, but we can extract that the Hybrid optimisation methods have associated a high computational cost, that we can reduce by a combination of hybrid genetic algorithms with the local search methods. Another parallel conclusion is that this method has more sense to do a multi-objective optimization.

To discretize the review, it's been analysed the presentation dividing in the same section that the author. On the introduction part, was described several useful parameters and concepts, but not all these concepts are used along the rest of presentation. Also, in this part use examples and mention different methods but there isn't a reference of where appear these concepts. This introduction it's not really an introduction of the hybrid method optimization, is an introduction of the optimization process. This produce that where mention the different algorithms do you search a reference to hybrid algorithms. But the introduction of hybrid algorithms finish when the speaker explains the GA.

The main part of presentation over 20 minutes explain the deterministic, evolutionary and genetic algorithms, and in the explanation of their hybrid Pareto-Nash method mention that are based on all these concepts and in the Nash game that don't have any slide. All these things converge in the fact that it's too difficult to relate the genetic algorithm method Pareto- Nash with the previous concept except the genetic algorithm that it's the better explained because is the base of the hybrid method.

Finally analysing the conclusion or the examples and application, the concept it's clearer, indeed, the concept of multi-objective analysis is better related with the hybrid optimization. In the examples it's easy to extract how interact the different players of Nash game to coverage, and that this time of converging is improved because the methods work in parallel with the different design parameter due to the players, also how the player are communicating between of them when one of them converge first the others can converge using the information of the first player.

The main problem of presentation is despite be good expressed the base of hybrid genetic algorithm Pareto – Nash, not explain with accuracy the relation between the different parts of code algorithm, make impossible to work in the same line with the information of the presentation.