The paper has been considerably improved and now my comments have been properly addressed:

1. The authors make clear that the algorithm is applied to deterministic models.

2. They provide a clear explanation about how to avoid basis degenerations. This is extremely important in equation 8.

3. The computational effort of the method is compensated with the re-use of the computed parameters for future simulations.

4. The number of model propagations required during the optimization process is clear now.

Since all my comments have been taken into account in order to improve the paper, I suggest to accept this revision.