

Accepted Manuscript

Dynamical Accelerated Performance Measure Approach for Efficient Reliability-Based Design Optimization with Highly Nonlinear Probabilistic Constraints

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PII: S0951-8320(17)31437-0
DOI: [10.1016/j.ress.2018.05.015](https://doi.org/10.1016/j.ress.2018.05.015)
Reference: RESS 6166



To appear in: *Reliability Engineering and System Safety*

Received date: 10 December 2017
Revised date: 14 May 2018
Accepted date: 20 May 2018

Please cite this article as: Behrooz Keshtegar , Souvik Chakraborty , Dynamical Accelerated Performance Measure Approach for Efficient Reliability-Based Design Optimization with Highly Nonlinear Probabilistic Constraints, *Reliability Engineering and System Safety* (2018), doi: [10.1016/j.ress.2018.05.015](https://doi.org/10.1016/j.ress.2018.05.015)

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Highlights

- A dynamical accelerated performance measure approach (PMA) is proposed to improve efficiency and robustness of RBDO.
- A novel merit function is proposed to select the dynamical control factor in DCC.
- Dynamical chaos control is accelerated between 2 and 0 to improve the convergence properties of FORM in PMA.
- Proposed PMA –based DCC method provides efficient and robust results compared to existing RBDO-based PMA methods.

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