Accepted Manuscript

Generalized Reliability Importance Measure Using Gaussian Mixture

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PII: S0951-8320(17)30838-4
DOI: 10.1016/j.ress.2018.01.005
Reference: RESS 6046

To appear in: *Reliability Engineering and System Safety*

Received date: 13 July 2017
Revised date: 13 December 2017
Accepted date: 17 January 2018

Please cite this article as: Taeyong Kim , Junho Song , Generalized Reliability Importance Measure Using Gaussian Mixture , *Reliability Engineering and System Safety* (2018), doi: 10.1016/j.ress.2018.01.005

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Highlights

- The concept of FORM importance measures are generalized to handle challenging problems.
- GRIM overcome challenges in problems with multiple critical subdomains or large curvature.
- Using regional participation factors, the relative importance is evaluated per each critical region.
- GRIMs are computed using a Gaussian mixture model fitted to the density in the failure domain.
- Various numerical examples successfully demonstrate merits and applicability of GRIMs.

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