

NEW! Engineering Design Reliability Handbook

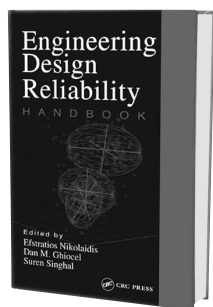
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BUILD RELIABILITY INTO EVERY PROJECT



Researchers in the engineering industry and academia are making important advances on reliability-based design and modeling of uncertainty when data is limited. Nondeterministic approaches have enabled industries to save billions by reducing design and warranty costs and by improving quality.

Considering the lack of comprehensive and definitive presentations on the subject, **Engineering Design Reliability Handbook** is a valuable addition to the reliability literature. It

presents the perspectives of experts from the industry, national labs, and academia on non-deterministic approaches including probabilistic, interval and fuzzy sets-based methods, generalized information theory, Dempster-Shaffer evidence theory, and robust reliability. It also presents recent advances in all important fields of reliability design including modeling of uncertainty, reliability assessment of both static and dynamic components and systems, design decision making in the face of uncertainty, and reliability validation. The editors and the authors also discuss documented success stories and quantify the benefits of these approaches.

With contributions from a team of respected international authors and the guidance of esteemed editors, this handbook is a distinctive addition to the acclaimed line of handbooks from CRC Press.

FEATURES

- Presents perspectives of experts from national labs, industry and academia on non-deterministic approaches and documented success stories to help you identify areas of future research and realize the benefits of non-deterministic approaches for your organization.
- Considers both probabilistic and non-probabilistic approaches and demonstrates their benefits to real life applications, giving you a suite of tools to manage uncertainty in research and product design with significant cost savings and quality improvement.
- Considers the issue of modeling uncertainty when information is scarce and imprecise, and provides you with a good understanding of different types of uncertainties and much needed tools to model uncertainty in real life problems.



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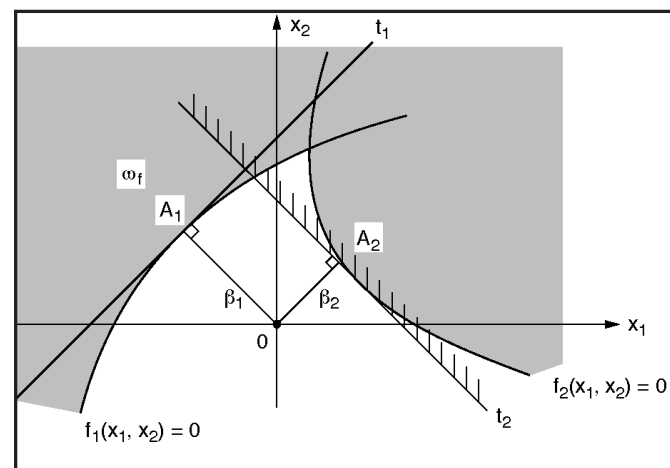


Figure 15.13 Illustration of series system with two failure elements

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