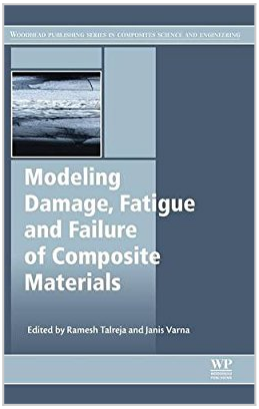

Modeling Damage, Fatigue and Failure of Composite Materials (Woodhead Publishing Series in Composites Science and Engineering)

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Modelling Damage, Fatigue and Failure of Composite Materials provides the latest research on the field of composite materials, an area that has attracted a wealth of research, with significant interest in the areas of damage, fatigue, and failure.

The book is a comprehensive source of physics-based models for the analysis of progressive and critical failure phenomena in composite materials, and focuses on materials modeling, while also reviewing treatments to give the reader thorough direction for analyzing failure in composite structures.

Part one of the book reviews the damage development in composite materials such as generic damage and damage accumulation in textile composites and under multiaxial loading, while part two focuses on the modeling of failure mechanisms in composite materials with attention given to fibre/matrix cracking and debonding, compression failure, and delamination fracture. Final sections examine the modeling of damage and materials response in composite materials, including micro-level and multi-scale approaches, the failure analysis of composite materials and joints, and the applications of predictive failure models.

- Examines current research in modeling damage, fatigue, and failure of composite materials
- Provides a comprehensive source of physics-based models for the analysis of progressive and critical failure phenomena in composite materials
- Assesses the failure and life prediction in composite materials
- Discusses the applications of predictive failure models such as computational approaches to failure analysis

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Editorial Review

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