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**A modified Paris relation for fatigue delamination with fibre bridging
in composite laminates**

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Abstract:

The aim of present research is to determine fatigue delamination with fibre bridging in composite laminates. Both the Paris relation and the Hartman-Schijve equation were employed to explore fatigue delamination behavior. The use of the Paris relation can result in fatigue delamination growth being crack scale dependent. This dependence was significantly reduced in case of using the Hartman-Schijve relation in data reduction. This difference can lead to controversies on fatigue delamination behavior in composite laminates. To address this dispute, a new parameter, which was consistent with the hypothesis of similitude as well as damage mechanisms, was introduced to represent the similitude in fatigue delamination growth. A modified Paris relation based on this parameter was proposed and used to determine fatigue

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