

PRACTICAL APPLICATION OF FRACTURE MECHANICS IN WOOD

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FRANKE S.^{*}, CO-ORGANIZER IN CLARIFICATION[†]

^{*} Bern University of Applied Sciences
Solothurnstrasse 102, 2506 Biel-Bienne
Steffen.franke@bfh.ch

[†] Affiliation
Postal Address
E-mail address and URL

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ABSTRACT

The MS shall show recent possibilities in modelling of fracture behaviour in timber and also bring together researcher in this field for exchange of knowledge in this topic. The modelling of cracking in timber is still challenging due to the complex orthotropic stress-strain relationship and failure behaviour. Ansys recently introduced a new technique for modelling path independent fracture. Using this technique could be an important step forward for the analyses of failure mechanism and behaviour in timber. Especially knowledge and experience using this, or other new techniques are of high interest of the MS.

A further intention of the MS is to bring together young researcher within this topic. Therefore, abstracts of young researchers under 40 will be given priority. Possible topics could be:

- Path-dependend or path-independent fracture modelling
- Use of cohesive-zone material laws
- Cracking of timber due to moisture impact
- Investigations of fracture energies for timber
- Use of fracture energies for determination of load capacities e.g. in connections
- Case studies where fracture applied
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