

MINISYMPOSIUM AT IACM / ECCOMAS Congress 2008

Title: Computational procedures and models for quasi-brittle materials

Organisers and session chairs Dr Tony Jefferson, Cardiff University.
Prof. Günter Hofstetter, Universität, Innsbruck

Code Session 10

ABSTRACT

Although extensive research endeavours in the field computational modelling of quasi-brittle materials and of the development of algorithms for nonlinear finite element analyses of structures made of quasi-brittle materials have been undertaken in the last decades, considerable challenges remain. The multi-faceted behaviour of these materials is immensely complex and much further development is needed together with reliable computational models for predicting the short term and long term time-dependent responses to mechanical, temperature and environmental loadings. In particular, there remain very significant problems associated with the numerical stability and accuracy of models for predicting distributed and localised cracking behaviour.

The aim of the Minisymposium is to identify the major challenges remaining in modelling of quasi brittle materials and discuss recent research that provides potential solutions to these challenges, with a particular focus on modelling cracking. The participants will be asked to consider both material simulation and computational aspects of their models.

The proposed programme comprises a brief Introduction, 2 or 3 sessions, the first one with 2 keynote lectures, and closing remarks.

PARTICIPANTS

Agreements to participate in the mini symposium have been received from the following people, with there being a few invitations outstanding,

J Ozbolt, Stuttgart

H Schreyer, Albuquerque

H Askes, Sheffield

A Ibrahimbegovic, Cachan

R. Desmorat, Cachan

R Lackner, Wien

C. Bucher, Weimar (Or representative, Dr Most)

L.J. Sluys, Delft