

## ANNOUNCEMENT

### SYMPOSIUM ON ENERGY RELEASE RATES AND PATH INDEPENDENT INTEGRALS IN DEFECT- AND FRACTURE MECHANICS

Bad Honnef, Fed. Rep. Germany, 9–11 January 1985

#### *Aim of the symposium*

One of the important tasks of fracture mechanics is the calculation of crack extension (or material) forces (i.e. energy release rates). More generally, these material forces are also relevant in defect mechanics. It is the aim of the symposium to discuss and in this way clarify these concepts and their relation to so-called path-independent integrals (such as the  $J$ -integral). Of particular interest will be the mathematical foundations of these concepts, including invariance considerations. The physical relevance of material and spatial conservation (or balance) laws for crack and defect growth criteria will be illuminated. Welcome will also be a discussion of related numerical and experimental methods. It is expected that the symposium will deal in addition with possible constraints imposed by constitutive relations of the material, e.g. thermoelastic, inelastic, nonlinear or plastic response of solids and various behavior of fluids.

#### *Main topics*

- (1) Mathematical foundations of conservation laws and modelling in defect and fracture mechanics.
- (2) Calculation of energy release rates in various continua including elastic and inelastic solids as well as fluids.
- (3) Applications to damage and fracture mechanics.

#### *Date, location and organization*

The symposium will be held from 9 to 11 January 1985 in Bad Honnef (near Bonn), Fed. Rep. Germany.

The organizers are

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#### *Participation*

Interested persons are requested to contact Prof. D. Gross as soon as possible. The facilities at Bad Honnef are limited to approx. 50 participants. Prospective authors are asked to submit titles of papers by 15 September 1984. Further information regarding the program and the organization details will be made known later.

#### *Mailing address*

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