**Czech Society for Mechanics
and Institute of Thermomechanics, CAS**

invite you to a lecture and discussion within
the lecture series **Institute of Thermomechanics Seminar**

Finite Fracture Mechanics
and its Applications to Composite Materials

given by

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The basic assumption of Finite Fracture Mechanics (FFM) is to allow crack growth by (possibly) finite steps, in opposite to the hypothesis of crack growth by infinitesimal steps adopted in classical Linear Elastic Fracture Mechanics (LEFM). The coupled (stress and energy) criterion of FFM introduced by D. Leguillon (2002) requires that both stress and energy conditions are simultaneously fulfilled for such a finite crack advance. A quite general formulation of the coupled criterion of FFM leading to an optimization problem is introduced. Several examples of applications of this coupled criterion to the prediction of damage initiation in form of cracks at micro- and meso-scale in composites are presented.

**The lecture will be held on Wedneday, March 28, 2018 at 11:00 in the building
of the Institute of Thermodynamics (lecture room B), Dolejškova 5, 182 00 Prague 8**

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