



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

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

Behaviour of brittle materials under dynamic loading.

given by

Jaroslav Buchar and Jan Trnka

Institute of Thermomechanics, Czech Academy of Sciences

The lecture deals with some achievement on description of brittle materials behavior at high-strain-rate loadings such as: air blast loading or percussive drilling of rocks, ballistic impact against ceramic armour or transparent windshields, plastic explosives used to damage or destroy concrete structures, soft or hard impacts against concrete structures and many others in civil and military applications.

The most popular dynamic testing techniques used for this which are based on the use of split Hopkinson pressure bar methodologies and/or plate impact testing methods are briefly described. The influence of the strain rate on the material strength is discussed. Some constitutive equations are presented. Some of them are used in the numerical simulation of some ballistic loading of ceramics.

**The lecture will be held on Tuesday, April 10, 2018 at 13:00 in the building
of the Institute of Thermodynamics (lecture room B), Dolejšková 5, 182 00 Prague 8**