Czech Society for Mechanics
and Institute of Thermomechanics, CAS

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

Research on synthetic jets

given by

Assoc. Prof. Zdeněk Trávníček
Institute of Thermomechanics, v.v.i., CAS, Prague

Synthetic jets are fluid flows which are generated from periodically oscillating fluid. In spite of zero time-mean flux at the actuator, a non-zero time-mean jet flow can be generated (synthesized) from a train of individual fluid "puffs". These flows have many perspective applications such as active control of flowfields and thermal fields (external and internal aerodynamics, cooling, mixing, etc.). The basic advantage is the simplicity – neither fluid source (compressor, blower, pump) nor supply piping is required. Therefore, the synthetic jet has been subject of intensive investigations recently.

The topic has been investigated at the Institute of Thermomechanics since 2001. For example, the following particular tasks have been solved: (1) Impinging synthetic jet and heat transfer enhancement, (2) newly proposed principle: "hybrid synthetic jet", (3) formation criterion of synthetic jets and identification of flow regimes, and (4) geometry optimization..

The lecture will be held on Wednesday, December 6, 2017 at 10:00 in the building of the Institute of Thermodynamics (lecture room B), Dolejškova 5, 182 00 Prague 8

Contact persons: Radek Kolman, Hanuš Seiner