



## Lecture No.70

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

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

### **Film-based shear stress sensor**

given by

**Ing. Zuzana Broučková, Ph.D.**

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The talk will summarize the six-month stay of the author at the School of Mechanical, Aerospace and Civil Engineering of the University of Manchester, UK. The stay was focused on the research and development of the novel experimental technique for evaluation of the shear stresses on the wall washed by the fluid flow. This technique is based on attachment of a sensor made out of elastic material on a surface/wall (film-based shear-stress sensor). Subsequently, the shear stress is evaluated from the deformation of the sensor under loading (both instantaneous and time-average shear stresses). The advantage of this method is its possibility to measure very low shear stresses, i.e. to use it in flows with very low velocities. Moreover, it is also possible to use it e.g. in water-channels and on curved surfaces, where many other commonly used methods are unable to work.

**The lecture will be held on Wednesday, September 18th, 2019 at 10:00  
at the Institute of Thermodynamics (lecture room B), Dolejškova 5, 182 00 Prague 8**