



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

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

On gravitational waves and 2017 Nobel Prize for Physics

given by

Jiří Chýla

Institute of Physics of the Czech Academy of Sciences

Four weeks ago Nobel Prize for Physics had been awarded to three leading scientists from LIGO-VIRGO Collaboration “for decisive contributions to the LIGO detector and the observation of gravitational waves”. In this seminar I will first recall basic facts about the origin and detection of gravitational waves in general and then discuss in nontechnical terms the construction and amazing sensitivity of LIGO detector as well as the way how the gravitational waves are recorded and presented.

The crucial role of the three Nobel Prize Laureates will be emphasized and all five signals of gravitational waves so far recorded by LIGO will be briefly described.. Particular attention will be paid to the very recent one, announced on October 16, which originated from the collision of two neutron stars and which has also its optical counterpart as Gamma Ray Burst, observed by two space-based telescopes. Finally, future observatories, that would significantly extend the capabilities of LIGO-VIRGO, will be briefly discussed.

**The lecture will be held on Wednesday, November 1, 2017 at 10:00 in the building
of the Institute of Thermodynamics (lecture room B), Dolejškova 5, 182 00 Prague 8**