Colloquium, Wednesday, 27th March 2019, 15:30 at B115, FJFI ČVUT, Břehová 7

Prof. Horácio Fernandes
Instituto de Plasmas e Fusão Nuclear, Instituto Superior Técnico, Universidade de Lisboa

"World Pendulum project and e-lab"

e-lab is a remotely controlled laboratory localized at Instituto Superior Técnico (IST) of the University of Lisbon. This laboratory provides remote control of real physics experiments over the Internet. Its main purposes are:

- to provide e-learning of science (24 hours per day and 7 days a week), by providing real scientific experiments (remotely controlled) and the tools needed for the subsequent data analysis,
- to provide to teachers and professors an auxiliary tool based on information and communication technologies for science,
- to motivate students to learn science by showing them real situations that prove the theory,
- to allow the realization of not so safe experiments (e.g. radioactivity), and
- to provide expensive experiments which cannot be acquired by a school or institution. Because of this, e-lab is a free, accessible, remotely controlled laboratory and can be accessed by everyone which has a computer with internet.

Some of these experiments are delocalized and one is particularly paradigmatic as it highlight the full potential of remote labs: the World Pendulum. Effectively the constellations of pendulums on e-lab allow users to measure local gravity at different latitudes bringing up a more accurate reading for the geodesic's models and our perception of Earths movement and structure.

If you are a believer of cosmic geocentric model we have assignments for you.