Axiomata sin Leges Motûs









## Seminar über Fragen der Mechanik

zu folgendem Vortrag wird herzlich eingeladen

## Mittwoch, 30.03.2022, 16:00 Uhr

https://fau.zoom.us/j/63673004994?pwd=cGJ1dnFQQ1ljdHA2Rlpta2Q3ZXI5UT09

From the world reality to the model... and from the model to the replacement of world reality:

The materialisation of the Eudoxus' model for the motion of planets and the similar materialisation of the abstract concept of force and internal tension

## Prof. Francesco dell'Isola

DICEAA and Memocs Università dell'Aquila

Some considerations about history of science are presented to prove the existence of a particular social phenomenon occurring in the groups of scientists when the awareness about the importance of theoretical concepts in technology is lost. Two examples are presented.

At first, the process of degradation of the mathematical and computational concepts used by Hellenistic science to calculate and forecast the apparent positions of planets as observed from Earth is presented. This degradation lead middle age scientist to believe that around the earth a set of metallic spheres are moving the planets, the moon and the sun. This part of the presentation is based on the few available sources and may be considered based on courageous conjectures.

Secondly, the degeneration of the mathematical concept of force is fully described (this is easier as the sources of this last process are fully available) leading to the Truesdellian distortion of the basic concepts of mechanics. Forces are a completely abstract concept; it has been materialised and treated as if one could meet them in the real world.

Some final conclusions are presented about the reaction against Truesdellism which are necessary.

m guage t mulua prosibil

Prof. Dr.-Ing. P. Steinmann Prof. Dr.-Ing. K. Willner

Prof. Dr.-Ing. S. Leyendecker

Lehrstuhl für Technische Mechanik Egerlandstraße 5, 91058 Erlangen

Lehrstuhl für Technische Dynamik Immerwahrstraße 1, 91058 Erlangen