



Contribution ID: 167

Type: **Oral presentations**

Exploring the non-linear viscoelastic properties of a mass-rubber band oscillator

Thursday 29 August 2024 10:30 (20 minutes)

This contribution outlines an experimental procedure that can be executed via smartphones in order to analyse the oscillations of a mass-loaded damped oscillator composed of an elastic rubber loop. By utilising this system, data regarding the viscoelastic characteristics of the rubber material can be acquired. The analysis is conducted by varying the mass. A non-linear model for the elastic force was determined to be necessary in order to account for the experimental data. This experiment gives students accurate experimental data and challenges them to evaluate models' capacity to explain observed behaviour.

How would you like to present your contribution?

Live in Kraków (time slot to be allotted based on the programme)

Target education level

University

Category

Formal Education

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