



Contribution ID: 54

Type: **Oral presentation**

A School Science Activity based on the Experiment With Images of the Falling Cylinder

Friday 4 July 2025 13:40 (20 minutes)

The experiment of a cylinder rolled on a string that falls vertically while unrolling is used to contextualize the teaching of the equation of motion of a body that turns around an axis with fixed orientation. The activity with students is led on the model-theoretical framework of science developed by Giere in the adaptation made by Izquierdo. The students read the position of the cylinder with time in images of a real motion and are oriented to develop a model, whose predictions are checked against the experimental result. This activity is being applied to beginner graduate students of Physics.

Education level

Pre-service and in-service teacher education

Physics topic

Full curriculum

Research focus

Active learning

Research method

Mixed method (qualitative & quantitative)

Organizing preference criteria

Physics topic

Authors: VANIN, VITO ROBERTO (Instituto de Física - Universidade de São Paulo); Dr MAIDANA, Nora Lía (Instituto de Física - Universidade de São Paulo); Ms CARVALHO, Daniella (Instituto de Física - Universidade de São Paulo); Dr MEDINA, Nilberto Helder (Instituto de Física - Universidade de São Paulo); Dr ADÚRIZ-BRAVO, Agustín (Universidad de Buenos Aires)

Presenter: VANIN, VITO ROBERTO (Instituto de Física - Universidade de São Paulo)

Session Classification: Parallel oral presentations

Track Classification: Physics teacher education & Professional learning (TEACH)