



Contribution ID: 45

Type: **Oral presentation**

## Online School Scientific Activities with Images of Real Experiments

*Friday 4 July 2025 13:20 (20 minutes)*

We have designed several school scientific activities on central topics in the curriculum of classical mechanics about translational and rotational motions, available at <http://www.fep.if.usp.br/~fisfoto>. They were developed in a model-theoretical view of science, using videos of experimental arrangements showing the movement of an object next to an instrument to measure its position. Sets of images with time codes enable students to study the dynamic evolution of the system and compare it to a mathematical model. Each activity comprises the image sets, an illustration of the arrangement, and analysis guides. We discuss our motivation, epistemological framework, and some results.

### 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

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**Session Classification:** Parallel oral presentations

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