



Contribution ID: 125

Type: **Oral presentation**

Non-constant acceleration kinematics. University students' difficulties related to representation systems

Thursday 6 July 2023 13:40 (20 minutes)

The aim of this work is to detect university students' difficulties in kinematics with variable acceleration in relation to different representation systems (graphical and algebraic) in order to define the Learning Demands. Thus, design bases of a TLS (Teaching-Learning Sequence) are laid. An open-ended questionnaire has been designed and validated in relation to the epistemological keys and the learning objectives to be achieved with the future TLS. In answering, the questionnaire students have to identify, relate, compare and analyse different systems of representation through verbal/written reasoning when elaborating explanations. The analysis of the questionnaire was carried out using phenomenography methodology.

How would you like to present your contribution?

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

Target education level (primary)

University education

Target education level (secondary, optional)

Primary authors: Ms URRUTIA, Any ((1) Department of Physical Sciences, Universidad Andrés Bello, Viña del Mar, Chile); Dr MERINO, Cristian ((2) Faculty of Sciences, Pontifical Catholic University of Valparaíso); ZUZA, Kristina (UPV/EHU (Applied Physics Department)); GUIASOLA, Jenaro

Presenter: ZUZA, Kristina (UPV/EHU (Applied Physics Department))

Session Classification: Innovative strategies at University

Track Classification: Innovative strategies and pathways to improve physics education at university