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Physics learning promoting culture and addressing societal issues

Contribution ID: **174** Type: **Oral presentation**

Investigating pre-service physics teachers' understanding of functions, formulas and equations in lab courses: A pilot study

The focus of the study is on how pre-service teachers understand mathematical expressions (equations) when they analyse experimental measurements in physics lab courses. Sixteen pre-service physics teachers participated. Data sources were open-ended written tasks, semi-structured interviews and lab reports. The participants have had particular difficulties when they reason with mathematical expressions as they demonstrate a restricted understanding of them as formulas only. It is easy for them to calculate slopes of line graphs by applying the "formula"for slopes, when they process experimental data. However, they experience difficulties when they need to calculate rates at particular points of a curve.

How would you like to present your contribution?

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

Target education level (primary)

Pre-service teacher education

Target education level (secondary, optional)

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