



Contribution ID: 182

Type: **Oral presentations**

Amusement parks, playgrounds and the equivalence principle –Physics for the whole body and a smartphone or small toys

Thursday 29 August 2024 12:50 (10 minutes)

What your body feels in swings, carousels or rollercoasters is related to the forces required to change motion. These forces can be visualized with small toys or be measured by a smartphone accelerometer, giving data that can be analysed in the physics classroom. The embodied experiences, as well as accelerometer data, depend on the equivalence between inertial and gravitational mass, which often leads to surprising consequences, that can deepen the understanding of Newton's laws. The poster will present a number of visual examples of experiments, demonstrations and analyses that challenge incomplete understanding.

How would you like to present your contribution?

Hybrid from my own country (early in the conference day, best for Asia, Australia)

Target education level

General

Category

Non-formal Education

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Session Classification: Poster session

Track Classification: Experiments and Practical Work in Physics Education