



# GIREP-EPEC

Transforming physics learning via Research & Practice  
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Type: **Poster**

## Back to basics: reinventing a simple cart experiment for kinematics

*Monday 30 June 2025 16:30 (1 hour)*

Kinematics is the first unit that students encounter in Croatian high schools, where experiments with ticker tape timer are one of the most common experiments. Analysis of the tape is very long and complex procedure for physics novices, even with great help and guidance from teachers. Our group managed to simplify the experiment, using only the cart, a ruler and two mobile phones. The easier setup enables straightforward analysis of the cart position at a certain time. The poster will present the experimental setup and the measurements for the most common kinematics experiments.

### Education level

Age 15-18 (Secondary education)

### Physics topic

Full curriculum

### Research focus

Lab experiments

### Research method

Other

### Organizing preference criteria

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**Session Classification:** Poster session

**Track Classification:** Laboratory-based physics (LAB)