



Contribution ID: 258

Type: **Oral presentations**

## Supporting Conceptual Understanding of the Electric Potential and the Electric Field using Virtual Reality

*Tuesday 27 August 2024 16:10 (20 minutes)*

Virtual Reality (VR) is a promising technology for enhancing concept learning in physics. We developed a three-dimensional VR learning environment comprising tasks on electric potentials and fields. In an experimental study with 210 students of the advanced track of the Swiss secondary school, we compared the learning gains when students solved the tasks using the VR environment with a VR headset or with a computer or in a non-VR setting using projections printed on paper. While there was no significant difference between the conditions overall, students with lower spatial abilities showed significantly greater learning gains in the VR headset condition.

### How would you like to present your contribution?

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

### Target education level

Secondary

### Category

Formal Education

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**Session Classification:** Oral presentations

**Track Classification:** Multimedia, AR, VR and AI in Physics Education