



GIREP-EPEC
3-7 July 2023
Košice, Slovakia

GIREP-EPEC conference 2023
Physics learning promoting culture
and addressing societal issues

Contribution ID: 128

Type: **Oral presentation**

Development of the mental models of wave and particle as basis for wave-particle duality

Wednesday 5 July 2023 17:20 (20 minutes)

Wave-particle duality is included in many high school physics curricula as a concept central to quantum physics. However, whether wave-particle duality can be taught effectively depends on the students' notions of the classical concepts of waves and particles and the ability to apply these concepts in modelling the physical world. Using a questionnaire on these concepts, we investigate the development of the mental models of waves and particles from novice to expert. The outline of this study as well as the results will be presented at the GIREP conference.

How would you like to present your contribution?

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

Target education level (primary)

Upper-secondary education

Target education level (secondary, optional)

In-service teacher education

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Presenter: OCKHORST, Rutger

Session Classification: Contemporary and modern physics

Track Classification: Contemporary physics and modern physics at school