EMBRACING CHANGES TOGETHER

Contribution ID: 71 Type: Oral presentations

Investigating the Role of Mathematics for Learning Quantum Physics

Tuesday 27 August 2024 10:50 (20 minutes)

Quantum physics is inherently described by mathematical structures. Hence, it seems plausible that mathematical knowledge might support its conceptual understanding already in upper-level secondary school. It is therefore desirable to develop and evaluate corresponding teaching-learning sequences. However, for a successful implementation, it is crucial that teachers accept and understand such sequences. In a first step, by an explorative interview study we investigate in-service teachers' and prospective teachers' acceptance and understanding of a mathematical description of fundamental principles of quantum physics. We present the analysis of the interview data with respect to attitudes about the teaching-learning sequence and difficulties in understanding.

How would you like to present your contribution?

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

Target education level

University

Category

Formal Education

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Track Classification: Physics Teacher Education and Professional Learning