



Contribution ID: 262

Type: **Oral presentations**

## From probabilities to Bell's inequalities: a pathway for secondary school quantum literacy

*Monday 26 August 2024 13:00 (20 minutes)*

Quantum Mechanics (QM) is a cornerstone of modern science and technology, yet its complexities have hindered its integration into school curricula. We propose a QM teaching/learning sequence for secondary schools that focuses on Bell's inequalities and their experimental verification, and outline a step-by-step approach, leveraging on students' existing knowledge of statistics and probability. Through hands-on activities, such as the demonstration of a simplified card game, and discussions of CHSH experiments, we clarify the main differences between classical and quantum probabilistic predictions. Preliminary results from informal and formal test sessions indicate promising results, suggesting the effectiveness of our approach.

### 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:** Contemporary Physics, Modern Physics in Schools and Universities