Contribution ID: **16**   Type: **Distance oral presentation**

Training Teachers on New Topics and New Tools in Physics Education

Thursday 7 September 2023 17:20 (20 minutes)

We report the result of a collaboration among Universities, Schools, and Institutions to increase interest in new tools and learning environments. To address this issue, we provide scientific and didactic support to teachers through different kinds of training sessions to introduce innovative didactic methodologies for teaching and learning. The project involved a training course both in streaming and carried-out sessions with university staff as well as secondary school teachers.

We selected current research themes such as climate change, space missions, and Einstein's relativity since they are not commonly included in the Physics curriculum; we suggested an approach based on some new methodologies and technologies to introduce these topics. We used microcontroller development boards for measuring environmental parameters, Artificial Intelligence, and data processing applied to Open Data from space missions or weather archives. We also suggested a new approach to teaching modern physics. For this purpose, we used a web-based platform to explore the basic concepts of relativistic physics by emphasizing its impact on Global Positioning Systems, which is of utmost importance in everyday life.

Contribution categories - primary focus

Primary and secondary school

Contribution categories - type

Application (shared experience, activity suggestions)

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Session Classification: Presentations/Workshops