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Type: **Parallel Talk**

HEPscape! The High Energy Physics Escape Room

Friday, July 8, 2022 9:00 AM (15 minutes)

HEPscape is an escape room about high energy physics. The project has been designed and created by researchers from the National Institute of Physics in Rome with the support of Sapienza, University of Rome.

Escape rooms for learning purposes are more and more frequent nowadays. HEPscape represents, based on the knowledge of the authors, the first particle physics escape room ever built so far. The escape room is an activity in which one finds him/herself involved in a specific environment: a series of unexpected events and challenges have to be solved in order to be able to get out of the game.

The proposed project, characterized by strong innovativeness and originality, aims to introduce the participants to the topics of high energy physics with a playful and fun approach, in which one learns by playing and collaborating in a group what does team work mean. HEPscape visitors learn while having fun some notions concerning particle physics and fundamental interactions, the functioning of the Large Hadron Collider (LHC) at CERN in Geneva and the recent or ongoing research activities of Compact Muon Solenoid (CMS) and ATLAS, two of the multi-purpose experiments operating at the LHC.

The visitors have the impression of visiting the LHC at CERN and of entering one of the experimental underground control rooms. HEPscape makes use of high-technology projectors, LED lamps controlled remotely and printed posters which replicate the control room environment. Through some clues, that are kept in lockers hidden in the room, the visitors discover how particle accelerators and high energy physics experiments are built and work. The project aims at a varied audience, from elementary school students, to high school students to adults, with attention also to people with special needs.

The riddles can be tuned to the age of the group, resulting in a fun and affordable experience for everyone. HEPscape is made of portable equipments that can be transported and assembled in less than two hours. This allows to use it in science fairs and exhibitions. In addition it can be brought on demand to high schools also in remote places. The possibility of creating the escape room in different languages is also envisaged.

So far HEPscape has registered more than 1000 visitors. Feedback and experiences from two science fairs happened in Italy in 2021 will be also presented in the talk.

In-person participation

Yes

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