

Wednesday, May 08, 14:00-15:00

Physics Department- H Block Seminar Hall

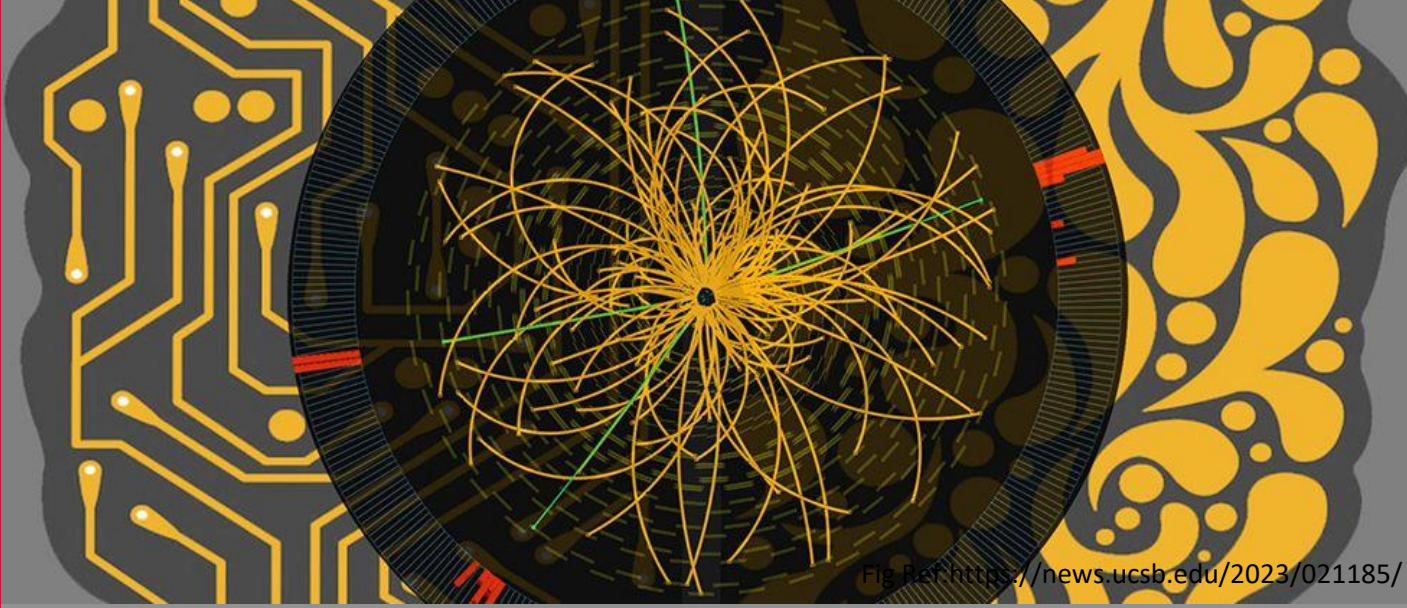


Fig. 188 <https://news.ucsb.edu/2023/021185/>

The CMS Experiment at the LHC: Dijet Channel, Artificial Intelligence in Particle Physics

This talk aims to summarize the main points of the work on new physics research in the Dijet channel of the CMS Experiment and applications of artificial intelligence in particle physics. The importance of the Dijet channel at the CMS Experiment and the contributions of research in this area to particle physics will be discussed. Dijet events allow the study of two high-momentum jets produced in high-energy collisions and are used as a tool for the detection of new physics phenomena.

Next, the importance and potential of artificial intelligence applications in particle physics will be emphasized. AI can play an important role in areas such as big data analysis, classification and pattern recognition. In this seminar, some examples of how AI can be used in particle physics research will be presented and potential opportunities in this field will be discussed.

Keywords: high energy experimental particle physics, machine learning, artificial intelligence



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Bora Işıldak obtained her Ph.D. degree in 2011 in Physics from Boğaziçi University. His research interest includes high energy physics, experimental high energy physics studies, particle accelerators, particle detectors and calorimeters, physics analysis and simulation studies.