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DEVELOPMENT OF MACHINE LEARNING TECHNIQUES AND NEURAL NETWORK ALGORITHMS IN PHYSICS

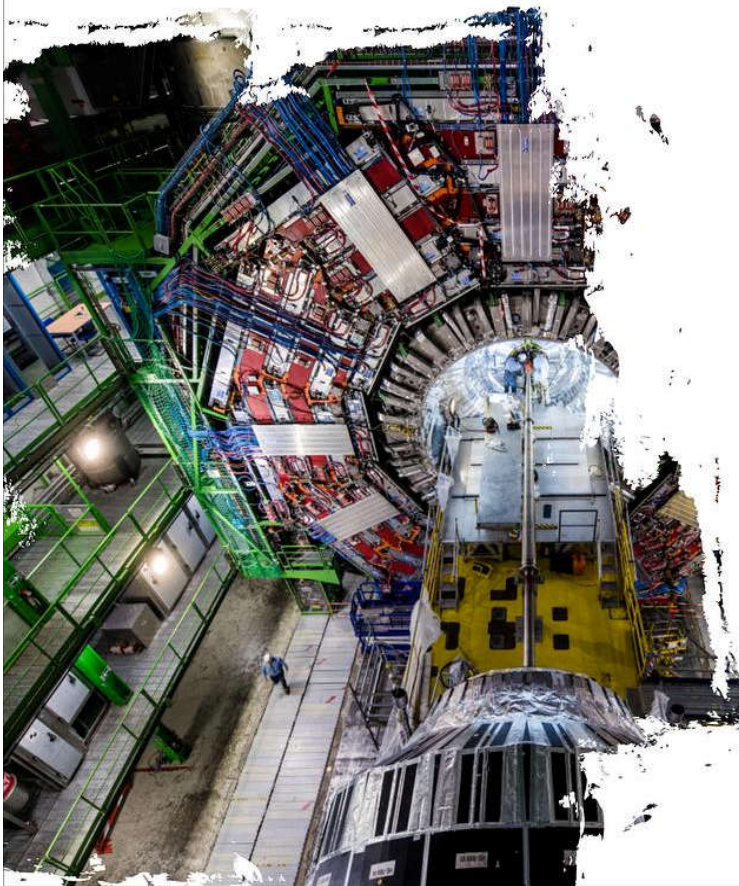
A step toward CERN - CMS collaboration



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PROJECT

DEVELOPMENT OF MACHINE LEARNING TECHNIQUES AND
NEURAL NETWORK ALGORITHMS IN PHYSICS - A
STEP TOWARD CERN - CMS COLLABORATION

FIELD OF STUDY

PHYSICS

PROJECT ACTIVITIES

CO-TEACHING,
COLLABORATIVE RESEARCH

RESIDENT SCHOLAR

RUDINA OSMANAJ - University of Tirana

DIASPORA SCHOLAR

ILIRJAN MARGJEKA - CMS experiment at CERN, INFN section of Bari



Team/Collaborators

① Dr. Ilirjan Margjeka (CMS, INFN section of Bari),
Experimental Particle Physics



② University of Tirana (Department of Physics):

Prof. Asoc. Rudina Osmanaj:
Computational Physicist,
Lattice QCD



Dr. Klaudio Peqini:
Computational Physicist:
Numerical and Theoretical Modelling



Prof. Asoc. Olta Çakaj:
Applied physics,
Material Science



③ Polytechnic University of Tirana (Department of Physics Engineering):

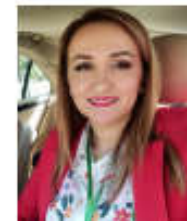
Dr. Enkelejd Çaça:
Experimental physicist,
Cosmology and Astrophysics



Prof. Asoc. Altin Gjevori:
Material Science
Nanotechnology



Prof. Asoc. Dafina Xhako:
Computational and
Medical Physics



Type of activities

- Collaborative Research
- Co-teaching

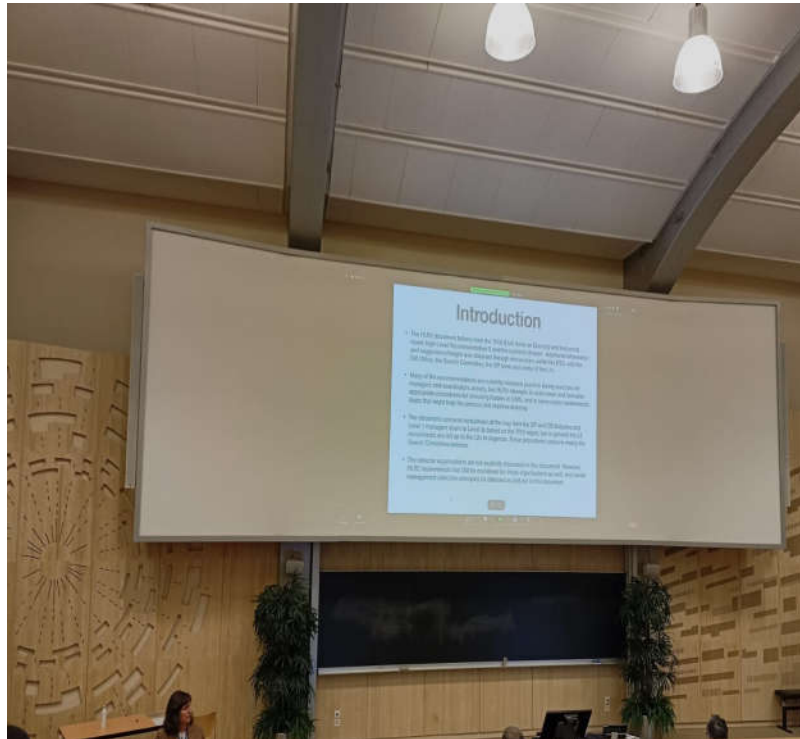
Field of expertise – Physics

(Programming, Algorithms Development, Data Analysis)

Final Objective/Aim - Join CMS Collaboration

- Develop algorithms suitable for the CMS data analysis (forecasting models, neural network algorithms, machine learning techniques)
- Train the academic staff
- Improve the technical infrastructure as a first step toward CERN.
- Prepare the CMS membership application.
- Request for pre – approval and approval of the study from the CMS committee.

CMS Albania proposal Presentation at CERN



Thank you!
Faleminderit!