

2021



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**UNIANDES PARTICLE
DETECTOR SCHOOL**

DECEMBER 13 - DECEMBER 15

WELCOME

- Private University Founded in 1948
- # 236, QS World University Ranking (2021)
- # 5, Times Higher Education Latin America University Rankings (2021)

- Undergraduate students : 14243
- Graduate students:
3321 Master, 387 PhD
- 737 Full time Professors

<https://planeacion.uniandes.edu.co/images/BoletinEstadistico/ComplementoEstadistico/SuplementoEstadistico2021.pdf>



- 41 Undergraduate programs
- 80 Master Programs
- 17 PhD programs





Physics Department

- 24 Professors
- 6 Postdocs
- 326 undergraduate students
- 10 MSc students
- 18 PhD students



HIGH ENERGY PHYSICS GROUP

- Lepton-nucleus potentials
- QED corrections to proton radius
- Quantum effects in gravity and cosmology.
- Non-linear QED

Exotic signals for LHC

Susy signals for LHC

3. PHENOMENOLOGY

4. THEORY

- QUARKNET Master Classes
- Biyearly Particle Physics school
- **Biyearly particle detector school**
- Biyearly Nuclear Physics school

5. EXTENSION

ACTIVITIES - HIGH ENERGY PHYSICS GROUP

1. CMS EXPERIMENT

2. INSTRUMENTATION LAB.

DATA ANALYSIS

GRID DATA OPERATIONS

RPC's, GEMS

GEM DETECTORS

BIOMEDICAL IMAGES

- SUSY VBF signals
- Exotic signals: Z' , Heavy neutrino

- 5 Engineers at CERN contributing to daily data operations

- Contributing to operation of RPC's
- Contributing to commissioning of GEM detectors.

- Two TGE_m with 2D readout assembled and being tested with muons, ^{55}Fe and X rays.

- TIMEPIX, MEDIPIX 3
Applications to mammography



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- The first school in VIRTUAL mode.
- 12 school lectures
- 3 Virtual laboratory modules
- 3 student talks

We thank all speakers for their contributions to this school!

- **93 registered participants to the school**

We welcome all participants, we wish you enjoy the school and learn many things

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Let's declare the school open !