

# MARCOS ANTÔNIO DE OLIVEIRA DERÓS

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Universidade Federal do Rio Grande do Sul (UFRGS), Instituto de Física

## SUMMARY

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I was born in Porto Alegre, Brazil. I have been studying Physics since 2017, started to research on Particle Physics in 2019 through Geant4 simulations. My most recent studies are the performance of the ALPIDE chip for low energies and the validation of electron energy deposition for Geant4 versions from 9.6 to 11.0. Due to my research, I have experience with Project  $O^2$ , Geant4 and data analysis with Python and ROOT.

## EDUCATION

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**Universidade Federal do Rio Grande do Sul, Brazil** *2017 - Present*

Degree in Physics

Final average: TBA

Undergraduate dissertation title: TBA

## RESEARCH EXPERIENCE

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**Universidade Federal do Rio Grande do Sul, Brazil** *2021 - Present*

Scientific Initiation Research

Advisor: Dr. Rafael Peretti Pezzi;

Project title: Studies on the ALPIDE Sensor Performance at Low Energies Regime and its Potential for Ion Beam Analysis.

**Grupo de Análise e Simulações de Partículas, Brazil** *2021 - Present*

Scientific Initiation Research

Advisor: Dr. Gabriela Hoff;

Project title: Validation of Geant4 Simulation of Electron Energy Deposition.

**Universidade Federal do Rio Grande do Sul, Brazil** *2020 - Present*

Scientific Initiation Research Fellowship

Advisor: Dr. Luis Gustavo Pereira;

Project title: Study on the Muon Dispersion in the ALICE's Absorber Using Geant4.

**Universidade Federal do Rio Grande do Sul, Brazil** *2019 - 2020*

Scientific Initiation Research Fellowship

Advisor: Dr. Luis Gustavo Pereira;

Project title: Study on the Behavior of Cosmic Radiation in Earth's Atmosphere.

## TECHNICAL STRENGTHS

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**Computer Languages** C, C++, Python, Bash

**Software & Tools** Geant4, ROOT, LaTeX

**Languages** Portuguese (native), Spanish (basic), English (advanced)

## PRESENTATIONS

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XXXIII UFRGS Initiation Research Meeting. Analysis of the dispersion of muons at the ALICE's Frontal Absorber using Geant4. *2021*

XXXII UFRGS Initiation Research Meeting. Study on the dispersion of muon at the ALICE's Frontal

Absorber through Geant4. *2020*

XXXI UFRGS Initiation Research Meeting. Study on the Behavior of the Cosmic Radiation at the Earth's Atmosphere. *2019*