

# Profile Overview

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Zamorano

General Studies Department  
Area of Mathematics and Physics

- **Masters & Ph.D.** at **PUC-Rio** (Pontifical Catholic University of Rio de Janeiro)
- **Posdoc** at **CBPF** (Brazilian Center for Research in Physics)
- Performed **Data Analysis** at **LHCb** (Large Hadron Collider beauty)
- **Co-Developer** of **Rio+** (a C++ tool for Amplitude Analysis)
- **Faculty** at **EAP-Zamorano** (Honduras)

- Used **Rio+** in Dalitz Plot Analysis
- $D \rightarrow hhh$  specially  $D \rightarrow \pi^+ \pi^+ \pi^-$
- Performed a **Model Independent** Partial Wave Analysis for the first time in the  $D \rightarrow \pi^+ \pi^+ \pi^-$  decay
- Also worked in  $B \rightarrow hhh$
- Now, as a developer of AA fitting tools, I am striving to include tools from Topological Data Analysis (TDA).
- My ultimate aim is contributing to build more **accessible**, **flexible**, and **efficient** tools for our community.

- (This is why I'm here today:) I'm seeking **feedback**, **suggestions**, and **partnership** to drive forward my efforts in creating more streamlined, user-friendly tools for amplitude analysis.
- I'm particularly interested in discussions around :
  - Fitting tools
  - Computational strategies
  - Ways to improve code readability and user-friendliness.
  - Topological Data Analysis (TDA) tools.

thank you

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