



Laura Karina Pedraza Motavita

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Date of document: 18/12/2023

v 1.4.3

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Summary of CV

This section describes briefly a summary of your career in science, academic and research; the main scientific and technological achievements and goals in your line of research in the medium -and long- term. It also includes other important aspects or peculiarities.

I attended school at the Lycée Français Louis Pasteur in Bogotá where I got my high school diploma equivalent, specialized in Math and Physics, with highest honors. Then, I started my superior studies in France by taking an intensive undergraduate preparation course for admission to engineering Grandes Ecoles (CPGE), and as a result of the general competitive exams, I enter one of the fifteen best engineering schools in France: Ecole Centrale de Lille where I received the diploma of Multidisciplinary Engineer. During my stay at Centrale Lille, I engaged a double degree with LTH, Faculty of Engineering at Lund University through a masters degree in Physics Engineering with specialization in Accelerators, Physics and Technology.

Currently, I am in my first year of PhD studies in the group of RF and Accelerators Physics at the Instituto de Física Corpuscular (IFIC) in Valencia. My work is focused on the studies of cavity beam position monitors (cBPMs) for guiding and stabilizing the beam in linear colliders. Our aim is to develop, manufacture and test a cBPM compatible with the international linear collider (ILC) specifications.

B.2. Breve descripción del Trabajo de Fin de Máster (TFM) y puntuación obtenida The aim of my Master's Thesis project was to study and evaluate of the design of cavity beam position monitors (BPM) for the International Linear Collider (ILC) project. The theoretical background on resonant cavities, including the beam coupling to the BPM, was examined. Theoretical predictions were confirmed by 3D electromagnetic simulations, with the commercial software CST, based on a basic design of cavity BPM. The simulations are also performed in order to understand the impact of the cavity geometry on the BPM. The state-of-the-art and the numerical results support the design of a cylindrical cavity with operational frequency of 1.495 GHz, with rectangular waveguides output ports used as filters to reject the monopole mode signal.



Laura Karina Pedraza Motavita

Surname(s): **Pedraza Motavita**
Name: **Laura Karina**
DNI: **Z1069471E**
Date of birth: **01/06/1999**
Gender: **Female**
Nationality: **Colombia**
Country of birth: **Colombia**
Contact province: **Valencia**
City of birth: **Bogotá**
Contact country: **Spain**
Contact aut. region/reg.: **Valencian Community**
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Current professional situation

Employing entity: Instituto de Física Corpuscular
Professional category: Estudiante de Doctorado
Start date: 05/10/2023
Type of contract: Temporary employment contract



Education

University education

1st and 2nd cycle studies and pre-Bologna degrees

- 1** **Name of qualification:** Diplôme d'Ingénieur
City degree awarding entity: Nord - Pas-de-Calais, France
Degree awarding entity: Ecole Centrale de Lille de Centrale Lille Institut
Date of qualification: 15/10/2023

- 2** **Name of qualification:** Degree of Master of Science in Engineering, Engineering Physics
City degree awarding entity: Sydsverige, Sweden
Degree awarding entity: LTH, Faculty of Engineering, Lund University
Date of qualification: 22/06/2023
Type of entity: University

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
English	C1	C2	C1	C1	C1
French	C2	C2	C2	C2	C2