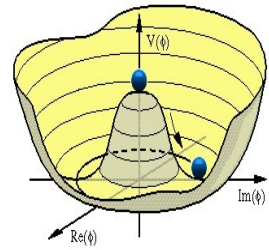




# COLLIDER PHYSICS IN MEXICO



**FACULTAD DE CIENCIAS FÍSICO-MATEMÁTICAS BUAP,  
SEPTEMBER 17th – 22nd, 2015,  
PUEBLA, PUE. MEXICO**

## SECOND BULLETIN

### I) INTRODUCTION

1. The discovery of the Higgs boson at the CERN LHC in 2012, has confirmed once again the great power of hadron colliders as discovery machines. Subsequent analyses have confirmed the Higgs signal, and they have tested its consistency within the framework of the Standard Model (SM) of elementary particles and forces. The LHC has also extended the limits on the mass scale of the new physics models that have been proposed to solve some of the open SM problems. This search for new phenomena is continued at the current phase of the LHC, which is working with higher energy (13 TeV) and detector improvements.
2. Nowadays, there is a participation of experimental groups from Mexican institutions at the LHC, and there is also a growing interest of our theory groups to contribute in the study of SM and New Physics signals at the CERN Collider. Both of these activities require an expert-level training in different areas, such as: QCD, SM and Collider Physics, which have been missing from the curricula of Mexican institutions with groups working in high energy physics.
3. With the purpose of filling this gap, we are pleased to announce the 1st Workshop "Collider Physics in Mexico" (CP-Mex), which will be held from September 17th - 22nd, 2015, at the Facultad de Ciencias Físico-Matemáticas (FCFM-BUAP), in Puebla, Mexico.
4. The goal of the workshop is to train students/postdocs and faculty, on the modern tools needed to analyze new physics signals at future colliders (LHC, FCC). It will also bring the possibility of developing new collaborations among those interested in the phenomenology of Particle Physics at hadron colliders.

## II) SCIENTIFIC PROGRAM

1. The program includes the following series of lectures:
  - a) Introduction to QCD - María Elena Tejeda-Yeomans (Unison, Mexico),
  - b) Amplitudes - Raffaele Fazio (Universidad Nacional de Colombia, Colombia),
  - c) Computer tools in HEP (Madgraph) - Matthew Low (University of Chicago, USA),
  - d) Review talks on physics at future colliders - Jens Erler (IF-UNAM, Mexico).
2. Tutorial sessions on collider computer tools will be held during the afternoons.
3. Additional talks (30 min) on Higgs physics, BSM and QCD related topics will be presented by those who would be interested. Please send your request to the organizers.

## III) ORGANIZATION AND FURTHER INFORMATION

1. There will be no registration fee. We will provide coffee during breaks but lunch and dinner will be covered by each participant.
2. Speakers and participants with fellowships will be hosted at Holliday Inn – La Noria, which is located in a commercial area not far from the University. The hotel will provide transportation to the University at 9:30 am.

**Address:** Circuito Juan Pablo II 1936, Ex Hacienda La Noria, 72140 Heróica Puebla de Zaragoza, Pue.

**Telephone:** 01 222 211 9000

**Webpage:** <http://www.holidayinn.com/hotels/us/es/puebla/pueln/hoteldetail>

3. Interested participants in this hotel should contact the hotel directly. Other recommended hotels located in downtown are: “Hotel Colonial”, “Hotel San Leonardo”.
4. Travel from Mexico City to Puebla by bus is easy, you can depart from North, South and East (TAPO) bus stations.
5. Those arriving by plane to Mexico City can take the bus to Puebla, right from the airport. The company “Estrella Roja” has ticket offices in both terminals 1 and 2. Some buses arrive to Puebla main bus station (CAPU), while a more convenient arrival is at the terminal “4 Poniente”. From any of those stations you can take a taxi to the hotel.
6. For further questions send email to organizers:

Prof. Lorenzo Diaz (FCFM-BUAP, [lorenzdx@gmail.com](mailto:lorenzdx@gmail.com))  
Prof. Humberto Salazar (FCFM-BUAP, [hsalazar@fcfm.buap.mx](mailto:hsalazar@fcfm.buap.mx))  
Dr. Roger José Hernández-Pinto (IFIC-Valencia, [roger.hernandez@gmail.com](mailto:roger.hernandez@gmail.com))