

**Session Program**

**30 November 2020 to 4 December 2020**



**5th ComHEP: Colombian Meeting on High  
Energy Physics**

***Neutrinos***

# Monday 30 November

14:00

## Neutrinos: Experiments

**Session** | **Location:** | **Conveners:** David Vanegas Forero, Mario A Acero

**14:00-14:30** **Neutrinoless double beta decay searches**

**Speaker**

Laura Cardani

**14:30-14:40** **Questions**

**14:40-15:10** **Neutrino oscillations**

**Speaker**

Erika Catano-Mur

**15:10-15:20** **Questions**

**15:20-15:35** **Break**

**15:35-15:55** **Front-end readout electronics for the PDS-SP of the DUNE Experiment**

**Speaker**

Deywis Moreno Lopez

**15:55-16:15**

**Description and constraints of the back-end trigger of the Photon Detection System in DUNE**

**Speaker**

Manuel AM

**16:15-16:35**

**Machine Learning Applications to Reactor Antineutrino Detection with PROSPECT**

**Speaker**

Diego Venegas Vargas

**16:35-16:55**

**The KM3NeT Neutrino Observatory: opportunities for Latin American collaborators**

**Speaker**

Prof. HAROLD YEPES RAMIREZ

**16:55-17:15**

**Probing the properties of relic neutrinos using the cosmic microwave background, the Hubble Space Telescope and galaxy clusters**

**Speaker**

Alexander Bonilla Rivera

**17:15-17:35** **Discussion**

17:35

# Wednesday 2 December

08:00

## Neutrinos: Theory

**Session** | **Location:** | **Conveners:** David Vanegas Forero, Oscar Alberto ZAPATA NOREÑA

08:00–08:30

### The diffuse supernova neutrino background, a new window to the Universe

**Speaker**

Yuber Perez

08:30–08:40

### Questions

08:40–09:10

### BSM physics program at DUNE

**Speaker**

Prof. Alexandre Sousa

09:10–09:20

### Questions

09:20–09:40

### Heavy Sterile Neutrino Decay at Short-Baseline Experiments

**Speaker**

Gabriela Vitti Stenico

09:40–10:00

### Neutrino oscillation probabilities due to possible non-standard interactions

**Speaker**

Mario A Acero

10:00–10:15

### Break

10:15–10:35

### Five texture zeros for Dirac neutrino mass matrices

**Speaker**

Richard Beanvides

10:35–10:55

### On the very nature of neutrinos: the inverse beta-decay as a test bench

**Speaker**

Giuseppe Gaetano Luciano

10:55–11:15

### Prediction for Neutrino Masses, CP Violation, Leptogenesis and Neutrinoless Double Beta Decay from $\mathcal{T}_{13}$ Flavor Symmetry

**Speaker**

Moinul Hossain Rahat

11:15–11:35

### Theory of Fast Flavor Conversion for Supernova neutrinos

**Speaker**

Soumya Bhattacharyya

12:00

11:35-11:55

**Discussion**