

**Session Program**

**23-25 Sept 2020**



**CoCo 2o2o: Cosmology in Colombia**

**CoCo**

# Tuesday 22 September

09:00

## CoCo

Session | Location:

09:00–09:10 **Welcome**

09:10–09:50 **Causality in Curved Spacetimes**

### Speaker

Claudia de Rham

09:50–10:10 **Generalized SU(2) Proca theory reloaded and beyond**

### Speaker

Yeinzon Rodriguez Garcia

10:10–10:30 **The Teleparallel version of Horndeski gravity**

### Speaker

Sebastian Bahamonde

10:30

10:50

## CoCo

Session | Location:

10:50–11:10 **Thermodynamics of  $f(R)$  Theories**

### Speaker

César Daniel Peralta González

11:10–11:30 **Cosmic inflation in a tensor-vector-scalar theory of gravity**

### Speaker

Cristhian Rodríguez Peña

11:30–11:50 **Construction of degenerate higher order scalar-tensor theories**

### Speaker

Mr Nestor Alberto Granados Hernández

11:50–12:10 **Generalized tracker Quintessence models for dark energy**

### Speaker

Nandan Roy

12:10

14:00

## CoCo

Session | Location:

14:00–14:20 **Topological mass generation and generalized 2-forms**

### Speaker

Juan Pablo Beltran

14:20–14:40 **Dark Energy from Coupled  $p$ -forms**

### Speaker

Alejandro Guarnizo

14:40-15:00

**Dynamical analysis of cosmological models with non-Abelian gauge vector fields**

**Speaker**

Cesar A. Valenzuela-Toledo

15:00-15:20

**Anisotropic Einstein Yang-Mills Higgs Dark Energy**

**Speaker**

JOHN BAYRON ORJUELA-QUINTANA

15:20-15:40

**No slow-roll inflation à la Generalized Chaplygin Gas in General Relativity**

**Speaker**

ALEXANDER GALLEGO CADAVID

15:40

16:00

**CoCo**

Session | Location:

16:00-16:20

**New cosmological constraints to find plausible dark energy candidates**

**Speaker**

Dr Luz Ángela García

16:20-16:40

**Constraining gravitational parity violation**

**Speaker**

Mrs Alejandro Cárdenas Avendaño

16:40-17:00

**Towards the one-loop galaxy bispectrum in the weak field approximation**

**Speaker**

Lina Castiblanco

17:00-17:20

**Coupled Multi-Proca Vector Dark Energy**

**Speaker**

Dr Gómez L. Gabriel

17:20-17:40

**Anisotropic solid dark energy**

**Speaker**

Josué Motoa Manzano

17:40

# Wednesday 23 September

09:00

## CoCo

Session | Location:

09:00–09:20

### Constraints on Reheating to SM Particles due to Large Effective Higgs Boson Mass

**Speaker**

Dr Luca Visinelli

09:20–09:40

### The CMB as a detector of high-frequency gravitational waves

**Speaker**

Dr Camilo Garcia Cely

09:40–10:00

### Effective Theory of Freeze-in Dark Matter

**Speaker**

Basabendu Barman

10:00–10:20

### UV Freeze-in in Starobinsky Inflation

**Speaker**

Nicolás Bernal

10:20–10:40

### Ultraviolet completion and predictivity from minimal parameterizations of Beyond-Standard-Model physics

**Speaker**

Carlos Mauricio Nieto Guerrero

10:40

11:00

## CoCo

Session | Location:

11:00–11:20

### Observable gravitational waves in minimal scotogenic model

**Speaker**

Arnab Dasgupta

11:20–11:40

### Creating matter antimatter asymmetry with non-standard cosmology

**Speaker**

Mr Devabrat Mahanta

11:40–12:00

### Lepto-Axiogenesis

**Speaker**

Nicolas Fernandez

12:00

14:00

## CoCo

Session | Location:

14:00–14:20

### Observing Left-Right Symmetry in the Cosmic Microwave Background

**Speaker**  
Dibyendu Nanda

14:20–14:40

**Cosmological evolution of Scalar Field Dark Matter with an Axion-like potential**

**Speaker**  
Dr Francisco Xavier Linares Cedeño

14:40–15:00 **Erasure of Topological Defects**

**Speaker**  
Juan Sebastian Valbuena Bermudez

15:00–15:20

**Gravitational Production of Superheavy Dark Matter and Cosmological Signatures**

**Speaker**  
LINGFENG LI

15:20–15:40

**Dark Energy in Five Dimensional Spherically Symmetric Universe with Future Singularity**

**Speaker**  
Mr Pheiroijam Suranjoy Singh

15:40

16:00

**CoCo**

**Session | Location:**

16:00–16:07 **CMB Temperature Spectrum considering massive neutrinos in  $\Lambda$ CDM**

**Speaker**  
Mr CRISTHIAN CALDERON CORDOVA

16:07–16:14 **The cosmic web through the lens of graph entropy**

**Speaker**  
María Valentina García-Alvarado

16:14–16:21 **Superclusters from velocity divergence fields**

**Speakers**  
jose david Peñaranda rivera, Dr Jaime Ernesto Forero Romero

16:21–16:28 **Relativistic stars in the generalized Proca theory**

**Speaker**  
William Jaimes Espíndola

16:28–16:35 **Kantowski-Sachs Cosmological Model with Chaplygin Gas**

**Speaker**  
Marcela Rodrigues

16:35–16:42 **Leptophilic Z' model: Hubble tension and CMB constraints**

**Speaker**  
Juan Pablo Arcila Maldonado

16:42–16:49 **Prueba Geométrica de Campos Trackers en Cosmología**

**Speakers**

alexander moreno, Mr alexander moreno

16:49-16:56

**Acotando el valor de la constante cosmológica con vacíos en la distribución espacial de galaxias**

**Speaker**

Carlos Miguel Cordoba Caycedo

16:56-17:03

**Midiendo la complejidad de la red cósmica**

**Speakers**

Diego Torres Guarín, Dr Jaime Forero Romero

17:03

# Thursday 24 September

09:00

## CoCo

Session | Location:

09:00–09:20 **Baryogenesis in the Standard Model EFT with dim 6 terms**

**Speaker**

Martha Alice Losada

09:20–09:40

**Mark weighted correlation functions to constrain cosmological parameters**

**Speaker**

Jaime Forero-Romero

09:40–10:00

**From the  $\beta$ -skeleton to the Cosmic Web elements**

**Speaker**

Mr John F. Suárez-Pérez

10:00–10:20

**Galaxy density-independent selection of Cosmic Void clustering sample and improvement of BAO scale measurement**

**Speaker**

Daniel Felipe Forero Sanchez

10:20–10:40

**Measuring Galaxy Assembly Bias in IllustrisTNG**

**Speaker**

Yeimy Dallana Camargo Camargo

10:40

11:00

## CoCo

Session | Location:

11:00–11:20

**Mediciones esperadas de la función de correlación de dos puntos en la primera fase de DESI**

**Speaker**

David Sierra Porta

11:20–11:40

**Optimization of Mapper of the IGM Spin Temperature (MIST) Antenna Parameters**

**Speaker**

Óscar Restrepo

11:40–12:00

**A pseudo-spectral for the numerical treatment of inhomogeneous and anisotropic cosmological models**

**Speaker**

Dr Leon Escobar Diaz

12:00–12:20

**EXTENDED BODY DYNAMICS IN GENERAL RELATIVITY**

12:20	<p><b>Speaker</b> Mrs Andrea González Campo</p>
14:00	<p><b>CoCo</b> Session   Location:</p>
	<p>14:00–14:20 <b>Cosmic dynamo equation under cosmological perturbations at first order</b> <b>Speaker</b> Juan Felipe Bravo Cárdenas</p>
	<p>14:20–14:40 <b>Reconstruction of mass profiles in disc-like galaxies based on its properties of lensing and rotational curves</b> <b>Speaker</b> Ms Itamar Alfonso López Trilleras</p>
	<p>14:40–15:00 <b>The Matter Spectrum at Second Order</b> <b>Speaker</b> Diego Fernando Fonseca Moreno</p>
	<p>15:00–15:20 <b>Forecasts on the speed of gravitational waves at high <math>z</math></b> <b>Speaker</b> Mr Alexander Bonilla Rivera</p>
15:30	<p>15:20–15:30 <b>Closure</b></p>
15:50	<p><b>CoCo</b> Session   Location:</p>
17:50	<p>15:50–17:50 <b>Interacciones Fundamentales</b> <b>Speaker</b> Suratómica</p>