



Summer School on Particle Physics

Talk Presenters

First week:

17/6

- ALLAHVERDIYEVA Minaya Minaya: Vector Meson Gravitational Form Factors and Generalized Parton Distributions at finite temperature within the soft-wall AdS/QCD Model
- ASGHARZADEH JELODAR Reza : Sigma-assisted Low-Scale Fundamental Composite Higgs Dynamics and Hierarchical Tuning
- AWASTHI Pravesh : Charged Lepton Flavour Violating meson decays in seesaw models.
- BAYARSAIKHAN Bilguun : Quantum Solitons
- BERA Sourav : Using angular observables to probe primary operators at colliders
- CARAM PATRIOTA Marcelle : On the analysis of the QCD spectral function and the $g-2$ of the muon
- CORBA' Sofia Panagiota : Correlated gravitational wave anisotropies from axion inflation
- DESAI Jay Tejas : Positivity at 1-Loop: Bounds on Photon and Gluon EFTs
- DE SOUSA LOURENCO Gabriel : Renormalisation scheme dependence of the Effective Potential
- FINKE Adrian Felix : Precision Calculation of the effective number of neutrinos in the Standard Model

19/6

- GHOSH Rituparna : A Window into the Georgi-Machacek Scenario
- HERNANDEZ CUEVAS Jose Angel : Precision predictions of partial decay widths in the general Two-Higgs-Doublet Model
- HMISSOU Ayoub : Exploring the 95 GeV Higgs Boson Excesses in the Framework of the $I(1+2)$ HDM
- IGNOTI Michela : Quantum estimation theory applied to the PMNS matrix: focusing on the CP violating phase
- KHANNA Akshat : Constraining the 3HDM parameter space
- KHAN Shabana : Implications of new physics in the light of $B^+ \rightarrow K^+ \nu \bar{\nu}$ measurement
- KROTH Jonathan David : Synchrotron radiation by slowly rotating fermions
- MCBLAIN Warin Patrick : Asymptotic Superluminality
- MONDOL Ranjini : Probing Neutrino Self-Interactions Using JWST Data
- PRASAD Anugrah : Approaching the Flavor Puzzle with insights from BGL models

20/6

- SAMANTA Subrata : NLO unitarity and stability bounds in extended Higgs sectors
- SCHUESSLER Maurice : NLO QCD Corrections to DM annihilation into

$\bar{q}q$ in the CxSM

- SINGH Labh : Inflation and Dark Matter in Type-III Scotogenic Model
 - SINGH Neelam : Finding the flavon of $Z_N \times Z_M$ flavour symmetry
 - SINGH Vartika : Renormalization-group improved Higgs to gluons decay rate
 - SNYDER Victoria : LieART 3.0
 - TIBERI Lorenzo : t-channel mediators in SMEFT
 - TRIBOLET Augustin Michel G : Modified Gravity Theories and the Amplification of Inflationary Perturbations
 - TSISKARIDZE Tinatin : Baryogenesis and Leptogenesis
- Second week:28(9)

24/6

- ADARSH Pratik : Probing Neutrinoless Double Beta Decay and Lepton Flavor Violation via Fully Determined Dirac Mass Terms in LRSM with Double Seesaw
- ALIZADEH DARGAH Arefeh : Spin-2 Dark Matter: Freeze-In Production and Observational Signatures
- COOK Cameron John : Deep learning optimal molecular scintillators for direct dark matter detection
- FILIPOWICZ Karolina Maria : Light Dark Pions from an $SO(N_{DC})$ confining Dark Sector with higher order operators
- GHOURMIN Es-Said : Associated charged Higgs boson production within the 2HDM: $e-e+$ versus $\mu-\mu+$ colliders
- GOMULKA Adam Krzysztof : CMB Constraints on Thermal Axions from Axion-Lepton Interactions
- KULEJEWSKI Mateusz Konrad : Reheating after a Supercooled First-Order Phase Transition
- LOPEZ FUENTES Manuel Antonio : Long-lived dark mediators from a Higgs portal model
- MAIA DE ARAUJO PAIXAO Matheus : Updated Bounds on Dark Matter decay via non-minimal couplings from cosmic rays and gamma rays

26/6

- MADERAZO Elliot Andrew : Dyonic Loops and Gravitational Instantons
- MARTINS GONCALVES Maria Alexandra : Dark Matter in singlet extensions of the Standard Model
- MASOMI JAHROMI Fatemeh : Dark Photon Constraints from CMB Polarization
- MATIAS Harold : Domain Walls from Discrete Flavor Symmetry Breaking
- MIGUNOV Ivan : Search for a candidate for Dark Matter in IDM theory through analysis of data from the CMS detector.
- PANDEY Shreya : Drell-yan constraints on charged scalars: a weak isospin perspective
- PAUL Partha Kumar : Cogenesis of matter and dark matter from triplet fermion
- PRAT Clarisse : Exploring a Composite Dark Matter Model Using CONTUR and MadAnalysis5
- RADICCE JUSTINO Lucia : A Z_4 symmetric model for self-interacting

dark matter and its detection probes

27/6

- REETZ DA SILVA Mirian : Re-assessing Fundamental Aspects of Axion Electrodynamics
- ROUZBEHI Rouzbeh : Probing the Dark Sector; Insights from Collider Constraints
- SAHA Subham : Probing right-handed neutrinos via trilepton signals at the HL-LHC
- STUBBS Henry Patrick : Supernova bounds on new scalars from resonant and soft emission
- TAPENDER Tapender : Phenomenological Study of a Radiative Type-III Seesaw Model with Two Inert Scalar Doublets
- TARAMATI – : Singlet-Doublet Fermionic Dark matter in gauge theory of Baryons
- THOMSON-COOKE Jasmine : Electroweak phase transition enhanced by a CP-violating dark sector
- VANDELEUR James John : The significance of a full EFT approach to neutrino mass in the light of next generation oscillation experiments.
- ZHANG Weihang : Scale Dependence of Neutrino Mixing Parameters in the Scotogenic Model