

# VIII AFUNALHUE "La Parte y el Todo" - Programme

Workshop on Advanced Topics on High-Energy Physics and Gravitation

Online 4th - 8th January 2021

<https://laparteyeltodo.wordpress.com/>

Note: All times are Chile Local Time, that is GMT/UTC -3

Chile local time GMT/UTC -3	Monday 4	Tuesday 5	Wednesday 6	Thursday 7	Friday 8
09:00 - 09:20	<b>Jorge Alfaro</b>  <i>Opening</i>	<b>Alfonso Zerwekh</b>  <i>"Non-Abelian Vectors in Dark Sectors"</i>	<b>Nikolaos Mavromatos</b>  <i>"Gravitational Anomalies in string-inspired Cosmologies, primordial gravitational-wave condensates and spontaneous Lorentz symmetry breaking: from dynamical inflation to matter-antimatter asymmetry"</i>	<b>Sergio Hojman</b>  <i>"A new way of solving the Schrödinger equation"</i>	<b>Kenzo Ishikawa</b>  <i>"Implications of the correction to the Fermi's golden rule"</i>
09:20 - 09:40	<b>Juan Garcia-Bellido</b>  <i>"Primordial Black Holes"</i>	<b>Gorazd Cvetič</b>  <i>"Hadronic contribution to muon g-2 in infrared-suppressed QCD"</i>	<b>Alex Soto</b>  <i>"Dynamical Majorana Neutrino Masses and Axions"</i>	<b>Ian Marquette</b>  TBA	<b>Alexander Andrianov</b>  <i>"Cylindrically symmetric 2 + 1 gravity in terms of global variables: Quantum dynamics"</i>
09:40 - 10:00	<b>Joan Solà Peracaula</b>  <i>"The Running Vacuum Model: a possible consistent overarching view of the cosmological evolution"</i>	<b>Giovanna Cottin</b>  <i>"Long-Lived Particles at the Large Hadron Collider"</i>	<b>Andreas Fring</b>  <i>"N-extended Lorentzian Kac-Moody algebras and their associated Toda field theories"</i>	<b>Nikolaos Dimakis</b>  <i>"Nonlocal conservation laws in geodesic systems: The exceptional pp-wave case"</i>	<b>Charanjit Singh Aulakh</b>  <i>"GUT symmetry breaking condensates via Generalised Konishi Anomaly"</i>
10:00 - 10:20	<b>Claudio Dib</b>  <i>"SWG0: The Southern Wide Field Gamma-ray Observatory"</i>	<b>Marcelo Loewe</b>  <i>"The effective magnetized QCD Phase Diagram"</i>	<b>Takanobu Taira</b>  <i>"Complex BPS solitons with real energies"</i>	<b>Theodosios Christodoulakis</b>  <i>"Automorphisms in Bianchi Type Cosmologies"</i>	<b>Bernard Julia</b>  TBA
<b>10:20 - 11:00</b>	<b>Break</b>	<b>Break</b>	<b>Break</b>	<b>Break</b>	<b>Break</b>
11:00 - 11:20	<b>Gustavo Branco</b>  TBA	<b>Diego Teca Wellmann</b>  <i>"Condensados en Cromodinámica Cuántica"</i>	<b>Alfredo Iorio</b>  TBA	<b>Rafael Bravo Guerraty</b>  <i>"A new soft theorem for single field inflation"</i>	<b>German Sierra</b>  <i>"Tensor Network Renormalization of Boson Fields"</i>
11:20 - 11:40	<b>José W. F. Valle</b>  <i>"Neutrinos and Search for Basic Symmetries"</i>	<b>Cristian Villavicencio</b>  <i>"External magnetic field effects on nucleons from QCD sum rules"</i>	<b>Darío López</b>  <i>"BPS black hole with non-Abelian soliton in Chern-Simons AdS supergravity"</i>	<b>Lucas Delage</b>  <i>"Extended MacDowell-Mansouri Supergravity"</i>	<b>Jose Luis Cortes</b>  <i>"Relativistic deformed kinematics as a signal of Quantum Gravity"</i>
11:40 - 12:00	<b>Rabindra Mohapatra</b>  <i>"Unified theory of neutrinos and dark matter"</i>	<b>Jonatan Vignatti</b>  <i>"RGE effects on lepton-favor violating neutral meson decays"</i>	<b>Olaf Lechtenfeld</b>  <i>"Stability of cosmic Yang-Mills fields"</i>	<b>Ricardo Stuardo</b>  <i>"JJbar Deformations of SL(N,R) WZW Models"</i>	<b>Manuel Asorey</b>  <i>"Asymptotic freedom and higher derivative gauge theories"</i>
12:00 - 12:20	<b>Poul H. Damgaard</b>  <i>"General Relativity from Scattering Amplitudes"</i>	<b>Aliwen Delgado</b>  <i>"The KaiKai detector: deep underwater geoscience of neutrinos plus supernova triangulation"</i>	<b>Juan Manuel González Brantes</b>  <i>"Exploring Rayleigh-Faber-Krahn Inequality"</i>	<b>Mikhail Plyushchay</b>  <i>"Conformal bridge transformation"</i>	<b>Joaquim Gomis Torne</b>  <i>"Non-relativistic and Carrollian limits of Jackiw-Teitelboim gravity"</i>
12:20 - 12:40	<b>Laurent Baulieu</b>  <i>"Unimodular Gauge in Gravity and Supergravity and ADM Leaf Gravity Path Integral"</i>	<b>York Schröder</b>  <i>"From sum-integrals to continuum integrals and back"</i>	<b>Pablo Pais</b>  <i>"Generalized uncertainty principle in three-dimensional gravity"</i>	<b>Luis Inzunza</b>  <i>"Hidden symmetries and quantum anomaly in a cosmic string background"</i>	<b>Domènec Espriu</b>  TBA
12:40 - 13:00	<b>Giovanni Amelino-Camelia</b>  <i>"Phenomenology of curvature-induced quantum-gravity effects"</i>	<b>Marat Siddikov</b>  <i>"Multiplicity dependence as probe of multiparton production mechanisms"</i>	<b>Vladimir Kazakov</b>  <i>"Quantum Spectral Curve of N=4 SYM and Fishnet CFT"</i>	<b>Alonso Contreras-Astorga</b>  <i>"Super-Klein tunneling of Dirac fermions through electrostatic gratings in Graphene"</i>	<b>Roberto Lineros</b>  <i>"WIMP Dark Matter in a Type-II seesaw scotogenic model"</i>

13:00 - 14:00	<b>Lunch</b> & <b>Free online discussion</b>	<b>Lunch</b> & <b>Free online discussion</b>	<b>Lunch</b> & <b>Free online discussion</b>	<b>Lunch</b> & <b>Free online discussion</b>	<b>Mauro Cambiaso (13:00 - 13:30)</b>  "LASF4RI - An update for the HECAP community in Chile and future steps"  &  <b>Closure of event</b>
14:00 - 14:20	<b>Rocky Kolb</b>  "The Gravitino Swampland"	<b>Sebastián Belmar-Herrera</b>  "Termodinámica para un agujero negro en 2+1 dimensiones con campo tipo-Coulomb"	<b>Luis Cancino Arancibia</b>  TBA	<b>Fidel Schaposnik</b>  "Competing orders in Field Theories, Condensed Matter (and Astrophysics?)"	
14:20 - 14:40	<b>Hugo A. Morales-Técotl</b>  "Inverse triad corrections and the quantum effective dynamics of the Schwarzschild black hole interior"		<b>Sebastián Filipini</b>  "TEM modes in a hollow cylindrical waveguide with an inner topologically insulating sheath"	<b>Moirá Venegas</b>  "Relic Density of Axion Dark Matter in Standard and non-Standard Cosmological Scenarios"	
14:40 - 15:00	<b>Antal Jevicki</b>  Diagrammatics of the gravitational mode in SYK Theories	<b>Daniilo Díaz</b>  "Matching Casimir and Cardy regimes for GJMS operators on the torus: role of the multiplicative anomaly"	<b>Alberto Martín-Ruiz</b>  "Anomalies induced transport: from high energy physics to condensed matter"	<b>Nicolás Mora</b>  "On rotating black holes in Quasi-topological gravity"	
15:00 - 15:20	<b>Juan Pérez-Mercader</b>  "Making life without biochemistry. A brief, but important, progress report"	<b>Pablo Pereira</b>  "The thermodynamics extended phase space for AdS Lovelock gravity by presymplectic approach"	<b>Kristiansen Lara</b>  "Holographic DC conductivity in 3D gravity"	<b>Gastón Giribet</b>  "The infinite symmetries of extremal black holes"	
15:20 - 15:40	<b>Nelson Videla</b>  "Small-field inflation on the brane: The Swampland Criteria and predictions for reheating in the light of PLANCK results"	<b>Cristóbal Corral</b>  "Topological terms and Misner string entropy"	<b>Hernán González Leiva</b>  "Celestial amplitudes and infrared divergences"	<b>Fernando Izaurieta</b>  "Torsion and Waves"	
15:40 - 16:20	<b>Break</b>	<b>Break</b>	<b>Break</b>	<b>Break</b>	<b>Break</b>
16:20 - 16:40	<b>Camilo las Heras</b>  "D2-branes with worldvolume and background fluxes as duals of the M2-branes"	<b>Pavel Kůs</b>  "Vortex solutions of Liouville equation and quasi spherical surfaces"	<b>Luca Smaldone</b>  "Topologically inequivalent quantizations"		
16:40 - 17:00	<b>Angel Rincon</b>  "Four dimensional Einstein-power-Maxwell black hole solutions in scale-dependent gravity"	<b>Cesar Arias</b>  "A CFT in the AdS infrared"	<b>Samuel Lepe</b>  "Phantom cosmology and future singularities"	<b>Leonardo Sanhueza</b>  "Higher Dimensional AdS Wormholes"	
17:00 - 17:20	<b>Mauricio Gamonal</b>  "Slow-roll inflation in $f(R, T)$ gravity"	<b>Joselen Peña</b>  "Soluciones tipo membrana rotante y de tipo Q-balls de la M2-brana con flujos"	<b>Theodoros Pailas</b>  "Dynamically equivalent $\Lambda$ CDM equations with underlying Bianchi Type geometry"	<b>Sasha Smolarchik</b>  "Horizonte cercano y termodinámica de agujeros negros sumergidos en campos magnéticos"	
17:20 - 17:40	<b>Adrián Arancibia</b>  "Lagrangian Quantum Mechanics for fermions: a self-consistent universe"	<b>Pablo Leon</b>  "Massive supermembrane in ten non compact dimensions"	<b>Matías López</b>  "Chaotic inflation in non-minimally coupled scalar-tensor gravity theory with Galileon-self interaction"	<b>José Figueroa</b>  "Slowly rotating black holes modeled by Solv geometries"	