

IoP 2022 - Joint APP/HEPP Conference

Monday, April 4, 2022

Parallel Talks: Stream A: LHC searches (1:45 PM - 3:45 PM)

-Conveners: Andy Buckley

time	[id] title	presenter
1:45 PM	[407] Physics case for the proANUBIS prototype	BRANDT, Oleg
2:00 PM	[313] Searches for long-lived particles with a disappearing track signature at $\sqrt{s} = 13$ TeV in the ATLAS experiment	SMITH, James
2:15 PM	[314] Search for heavy resonances decaying into a Z boson and a Higgs boson in final states with leptons and b-jets with the ATLAS detector at the LHC	QIU, Tong
2:30 PM	[315] Search for invisibly decaying Higgs bosons in ttH and VH channels in hadronic final states using full Run 2 data collected by the CMS detector	WHITE, Robert
2:45 PM	[316] Search for signatures of physics beyond the standard model (SM) in the di-tau final states using data collected at the CMS experiment from Run-2 at the LHC	UTTLEY, George
3:00 PM	[317] Searching for Beyond the Standard Model Physics using Tau Leptons	NORFOLK, Mitchell
3:15 PM	[318] Exploring Multilepton Signatures from Dark Matter at the LHC	FREEGARD, Arran
3:30 PM	[319] Decoding Dark Matter at future $e + e -$ colliders	BELYAEV, Alexander

Parallel Talks: Stream B: LHCb (1:45 PM - 3:45 PM)

-Conveners: Franz Muheim

time	[id] title	presenter
1:46 PM	[336] Model agnostic measurement of $B \rightarrow D^* \tau + \nu \tau$ angular coefficients using three-prong hadronic τ decays	SCANTLEBURY-SMEAD, Luke
2:00 PM	[337] Searching for New Physics through the decay $B \rightarrow K^* \mu^+ \mu^-$ at LHCb	BIRCH, Matthew
2:15 PM	[338] Model Independent Measurement of CKM Gamma using $B \rightarrow D^0 K, D^0 \rightarrow 2\pi^+ 2\pi^-$ Decays.	WESTHENRY, Benedict
2:30 PM	[339] Status of searches for rare or forbidden charm decays of the form $D^{\pm} \rightarrow h^{\pm} \ell^+ \ell^-$	ALIOUCHE, Zakariya
2:45 PM	[340] A Quasi model independent method to measure the relative strong phase in quantum correlated $D \rightarrow K_s \pi^+ \pi^-$ decays and an use in CKM measurements in $B^{\pm} \rightarrow D h^{\pm}$ decays.	LANE, Jake
3:00 PM	[341] Study of Ξ_b^- and Ω_b^- decays to the $\Lambda_c^+ h^- h'^-$ final state	PAGARE, Bhagyashree
3:15 PM	[342] VELO Module Construction for the LHCb detector upgrade for Run3	ZUNICA, Gianluca
3:30 PM	[343] Simulation of Low Gain Avalanche Detectors(LGAD) for LHCb operation in Run IV	FRIDAY, David

Parallel Talks: Stream C: short baseline ν (1:45 PM - 3:45 PM)

-Conveners: Melissa Uchida

time	[id] title	presenter
1:46 PM	[360] Sensitivity of a Boulby-based antineutrino detector to nuclear reactors over 100 km away.	KNEALE, Elisabeth
2:00 PM	[361] Recent results of the SoLid experiment	GALBINSKI, Daniel
2:15 PM	[362] Measurement of the Λ Baryon Production Cross Section in Neutrino Interactions with MicroBooNE	THORPE, Christopher
2:30 PM	[363] Measurement of the inclusive electron antineutrino cross-section on argon using the MicroBooNE detector	REGGIANI-GUZZO, Marina
2:45 PM	[364] Development of a search for Higgs Portal Scalars in MicroBooNE.	BHANDERI, Aditya
3:00 PM	[365] Reconstruction performance and characterisation of electromagnetic showers in the SBND detector.	ZGLAM, Ala
3:15 PM	[366] A study of neutral current pion events at Super Kamiokande	MARTIN, Dan
3:30 PM	[367] BOLEYN: a testbed for new neutrino detection technologies	SCARFF, Andrew

Parallel Talks: Stream D: Dark matter (1:45 PM - 3:45 PM)

-Conveners: Xin Ran Liu

time	[id] title	presenter
1:46 PM	[383] The LUX-ZEPLIN (LZ) Experiment	COTTLE, Amy
2:00 PM	[384] Se-Rn-dipitous Seque-LZ: Radon in LZ	ANGELIDES, Nicolas
2:15 PM	[385] Photon Detection in LUX-ZEPLIN (LZ) and LXe TPCs	BAKER, Albert
2:30 PM	[386] Saturation corrections in the LUX-ZEPLIN experiment	AL MUSALHI, Aiham
2:45 PM	[387] Preliminary projected sensitivity of LZ to Majoron-emitting double beta decay modes of ^{136}Xe	TONG, Zhaozhen
3:00 PM	[388] FlameNEST	PALMER, Jordan
3:15 PM	[389] Preparations for the first observation of the Migdal effect	MARLEY, Timothy
3:30 PM	[390] Exploring the current and future physics potential of liquid noble direct dark matter detection experiments	SANDFORD, Ellen

Tuesday, April 5, 2022

Parallel Talks: Stream A: LHC (11:00 AM - 12:30 PM)

-Conveners: Veronique Boisvert

time	[id] title	presenter
11:00 AM	[320] W-boson and its polarisation at NNLO	POPESCU, Andrei
11:15 AM	[321] Differential cross-section measurement for the electroweak production of W-gamma-jj at the ATLAS detector	HONAN, Benjamin
11:30 AM	[322] Probing the Standard Model with Rare Electroweak Multiboson Interactions	COOKE, Harry
11:45 AM	[323] Search for exclusive hadronic W boson decays with the ATLAS experiment	SILVA, Júlia
12:00 PM	[324] Optimization of the Bs/Bd separation power in the ATLAS B->mu mu branching ratio measurement	KOVANDA, Ondrej
12:15 PM	[325] A method for searching for parity violating physics at the LHC.	NOEL, Daniel

Parallel Talks: Stream B: parton showers and more (11:00 AM - 12:30 PM)

-Conveners: Chris White

time	[id] title	presenter
11:00 AM	[344] Colliding light, tau g-2, and axion detectors	LIU, Jesse
11:15 AM	[345] Towards an Algebraic Theory of Spin	BRADSHAW, Peter
11:30 AM	[346] MSHT20 Approximate N3LO Parton Distribution Functions with Theoretical Uncertainties	MCGOWAN, Jamie
11:45 AM	[347] Quarkonia showers in PYTHIA8	COOKE, Naomi
12:00 PM	[348] Quantum computing approaches for simulating parton showers in high energy collisions	WILLIAMS, Simon
12:15 PM	[349] Graph neural nets for CMS particle track reconstruction	LIV VAGE

Parallel Talks: Stream C: AION, MAGIS and axion DM (11:00 AM - 12:30 PM)

-Conveners: Teppei Katori

time	[id] title	presenter
11:00 AM	[368] MAGIS & AION: long baseline atom interferometry experiments	HAWKINS, Leonie
11:15 AM	[369] AION and MAGIS-100: Atom Interferometry Detectors Searching for Ultralight Dark Matter and Gravitational Waves and Their Limiting Systematics	MITCHELL, Jeremiah
11:30 AM	[370] imaging for the MAGIS and AION interferometers	WEATHERILL, Dan
11:45 AM	[371] A Phase Shear detection system for the MAGIS-100 and AION experiments	ELERTAS, Gedminas
12:00 PM	[372] Recent Progress in Radio Detection of Axion Dark Matter	MCDONALD, Jamie

Parallel Talks: Stream D: DM detectors (11:00 AM - 12:30 PM)

-Conveners: Theresa Fruth

time	[id] title	presenter
11:00 AM	[391] Towards efficient neutron spectroscopy with a Nitrogen-filled Spherical Proportional Counter	MANTHOS, Ioannis
11:15 AM	[392] Reaching the neutrino floor for sub-GeV dark matter with spherical proportional counters fully electroformed underground	KATSIOULAS, Ioannis
11:30 AM	[393] Qualification of Photo Detector Units for the DarkSide-20k experiment.	BALMFORTH, Zoe
11:45 AM	[394] Mitigating Accidental Backgrounds in LZ using Convolution Neural Networks	KHURANA, Ishan
12:00 PM	[395] A Next Generation Liquid Xenon Observatory	OLIVER-MALLORY, Kelsey
12:15 PM	[396] Sense and Sensitivity: Confronting the radiological screening challenges for next-generation rare event detectors	LIU, XinRan LIU, Xinran

Wednesday, April 6, 2022

Parallel Talks: Stream A: LHC upgrades (11:00 AM - 12:30 PM)

-Conveners: Tracey Berry

time	[id] title	presenter
11:00 AM	[326] Level-1 Track Finder for the CMS Upgrade for HL-LHC	HOLMBERG, Mei-Li
11:15 AM	[327] Neural Network-Based Primary Vertex Reconstruction with FPGAs for the Upgrade of the CMS Level-1 Trigger System	BROWN, Christopher
11:30 AM	[328] Performance and Upgrade of the CMS Electromagnetic Calorimeter	COOKE, Charlotte
11:45 AM	[329] Commissioning of L1Calo phase I upgrade at ATLAS: development and testing of eFEX and FTM modules	BIRD, Gareth
12:00 PM	[330] Improving the performance of dealing with non-ideal tracks within ATLAS reconstruction.	MCLAUGHLIN, Donal
12:15 PM	[331] Machine Learning based predictor for measurement-to-track association for the ATLAS Inner Detector Trigger	LAD, Nisha

Parallel Talks: Stream B: environmental & medical applications (11:00 AM - 12:30 PM)

-Conveners: Matthew Needham

time	[id] title	presenter
11:00 AM	[350] Cosmic Ray Neutron Sensors for IoT Soil Moisture Monitoring	STOWELL, Patrick
11:15 AM	[351] PlomBOX - development of a low-cost CMOS device for environmental monitoring	DIAS, Adriana
11:30 AM	[352] nFacet 3D: a novel dosimeter for effective dose measurement	REED, Nicholas
11:45 AM	[353] QuARC – A Quality Assurance Range Calorimeter for Proton Therapy	SHAIKH, Saad
12:00 PM	[354] Investigation of plasma (Gabor) lenses for capture and focusing of laser-driven ions	DASCALU, Titus-Stefan
12:15 PM	[355] Analysis of scintillating and reflective materials for X-ray Computed Tomography	TUCCORI, Nicolo

Parallel Talks: Stream C: long baseline ν (11:00 AM - 12:30 PM)

-Conveners: Jaroslaw Nowak

time	[id] title	presenter
11:00 AM	[373] The N_{ue}/N_{umu} Ratio within the NuMI Beam	MOOR, Alexandra
11:15 AM	[374] Status of the Triple Differential Numu Bar CC Inclusive Cross-Section Analysis using Data Collected by the NOvA Near Detector	SINGH, Prabhjot
11:30 AM	[375] Searching for an Improved NOvA 3-flavour Neutrino Oscillation Analysis Event Selection	MIKOLA, Veera
11:45 AM	[376] Transverse Kinematic Imbalance study in ProtoDUNE-SP for the interaction proton - argon	VERGANI, Stefano
12:00 PM	[377] Development of the Pandora LArTPC event reconstruction to optimise the sensitivity to CP violation at DUNE	MAWBY, Isobel
12:15 PM	[378] Calibration of DUNE Far Detector using cosmic-ray muons	KUMAR, Praveen

Parallel Talks: Stream D: LUXE, $0\nu\beta\beta$ and supernova ν (11:00 AM - 12:30 PM)**-Conveners: Teppei Katori**

time	[id] title	presenter
11:00 AM	[397] Detection and Reconstruction of High-Flux Electron Energy Spectra in the Strong-Field QED Regime with LUXE	HALLFORD, John
11:15 AM	[398] Status of the R2D2 $0\nu\beta\beta$ Experiment	KNIGHTS, Patrick
11:30 AM	[399] Characterisation of Germanium Detectors for LEGEND-200	ALEXANDER, Abigail
11:45 AM	[400] Detecting supernova neutrinos at SNO+	VALDER, Sammy
12:00 PM	[401] Supernova Discrimination with a Kiloton-scale Water Cherenkov Detector	SCHNELLBACH, Yan-Jie
12:15 PM	[402] Probing extreme-energy universe through EeV neutrino detection with the ANITA and PUEO experiments	XIE, Cheng

Parallel Talks: Stream A: LHC $t\bar{t}+X$ (1:30 PM - 2:30 PM)**-Conveners: Sarah Williams**

time	[id] title	presenter
1:30 PM	[332] Measurements of the differential production cross sections of a top quark pair in association with a Z boson with the ATLAS detector.	MINCE, Laurynas
1:45 PM	[333] Boosting the Higgs with $t\bar{t}(bb)$, using the ATLAS detector	BORBELY, Albert
2:00 PM	[334] Search for Four Top Quark Production at CMS	STYLIANOU, Nicolas
2:15 PM	[335] Measurement of Jet Substructure Observables in Boosted $t\bar{t}$ Events at 13-TeV Using the ATLAS Detector at the LHC	RENNIE, Adam

Parallel Talks: Stream B: LHCb (1:30 PM - 2:30 PM)**-Conveners: Paula Alvarez**

time	[id] title	presenter
1:30 PM	[356] Mixing and CP violation with $D^0 \rightarrow K\pi\pi$ at the LHCb experiment	HILTON, Martha HILTON, Martha HILTON, Martha
1:45 PM	[357] Search for local CP violation in the phase-space of $D^0 \rightarrow \pi^+\pi^-\pi^0$ decays using the energy test with LHCb Run 2 data	COBBLEDICK, John
2:00 PM	[358] Five-dimensional phase-space efficiency in $D \rightarrow K3\pi$ at LHCb for precision CP violation measurements	LANE, Richard
2:15 PM	[359] Beauty to doubly open charm decays with the LHCb detector	BISHOP, Fionn

Parallel Talks: Stream C: neutrino detectors (1:30 PM - 2:30 PM)**-Conveners: Matthew Malek**

time	[id] title	presenter
1:30 PM	[379] Large Area Picosecond Photodetectors for future neutrino detectors	FOSTER, Robert
1:45 PM	[380] A new easily scalable readout system for distributed photomultiplier detector networks	MÁNEK, Petr

2:00 PM	[381] Event by Event Directional Reconstruction in the SNO+ Scintillator Phase	PATON, Josephine
2:15 PM	[382] A Statistical Approach to Modelling the Optical Scattering Calibration System in SNO+	COOKMAN, Daniel

Parallel Talks: Stream D: muon physics (1:30 PM - 2:30 PM)

-Conveners: Kostas Nikolopoulos

time	[id] title	presenter
1:30 PM	[403] Measuring the anomalous precession frequency of the muon with the Muon g-2 tracking detectors	SWEETMORE, George
1:45 PM	[404] Searching for a muon EDM at the new g-2 experiment at Fermilab	VASILKOVA, Dominika
2:00 PM	[405] Physics Validations of Simulations for the COMET Low-Energy, Neutrinoless μ -e Conversion Experiment	DERVENI, Roden
2:15 PM	[406] Track pileup mitigation using a one-dimensional maximum likelihood fit for the Mu3e experiment	GAYTHER, Benjamin