

IoP 2022 - Joint APP/HEPP Conference

Monday, 4 April 2022

Parallel Talks: Stream A: LHC searches (13:45 - 15:45)

-Conveners: Andy Buckley

time	[id] title	presenter
13:45	[407] Physics case for the proANUBIS prototype	BRANDT, Oleg
14:00	[313] Searches for long-lived particles with a disappearing track signature at $\sqrt{s} = 13$ TeV in the ATLAS experiment	SMITH, James
14:15	[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
14:30	[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
14:45	[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
15:00	[317] Searching for Beyond the Standard Model Physics using Tau Leptons	NORFOLK, Mitchell
15:15	[318] Exploring Multilepton Signatures from Dark Matter at the LHC	FREGARD, Arran
15:30	[319] Decoding Dark Matter at future e^+e^- colliders	BELYAEV, Alexander

Parallel Talks: Stream B: LHCb (13:45 - 15:45)

-Conveners: Franz Muheim

time	[id] title	presenter
13:46	[336] Model agnostic measurement of $B \rightarrow D^* \tau^+ \nu_\tau$ angular coefficients using three-prong hadronic τ decays	SCANTLEBURY-SMEAD, Luke
14:00	[337] Searching for New Physics through the decay $B \rightarrow K^* \mu^+ \mu^-$ at LHCb	BIRCH, Matthew
14:15	[338] Model Independent Measurement of CKM Gamma using $B \rightarrow D_0 K$, $D_0 \rightarrow 2\pi^+ 2\pi^-$ Decays.	WESTHENRY, Benedict
14:30	[339] Status of searches for rare or forbidden charm decays of the form $D^+ \rightarrow \tau^+ \nu_\tau \ell^+ \ell'^- \nu_{\ell'}$	ALIOUCHE, Zakariya
14:45	[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
15:00	[341] Study of Ξ_b^- and Ω_b^- decays to the $\Lambda_c^+ h^- h'^-$ final state	PAGARE, Bhagyashree
15:15	[342] VELO Module Construction for the LHCb detector upgrade for Run3	ZUNICA, Gianluca
15:30	[343] Simulation of Low Gain Avalanche Detectors(LGAD) for LHCb operation in Run IV	FRIDAY, David

Parallel Talks: Stream C: short baseline ν (13:45 - 15:45)

-Conveners: Melissa Uchida

time	[id] title	presenter
13:46	[360] Sensitivity of a Boulby-based antineutrino detector to nuclear reactors over 100 km away.	KNEALE, Elisabeth
14:00	[361] Recent results of the SoLid experiment	GALBINSKI, Daniel
14:15	[362] Measurement of the Λ Baryon Production Cross Section in Neutrino Interactions with MicroBooNE	THORPE, Christopher
14:30	[363] Measurement of the inclusive electron antineutrino cross-section on argon using the MicroBooNE detector	REGGIANI-GUZZO, Marina
14:45	[364] Development of a search for Higgs Portal Scalars in MicroBooNE.	BHANDERI, Aditya
15:00	[365] Reconstruction performance and characterisation of electromagnetic showers in the SBND detector.	ZGLAM, Ala
15:15	[366] A study of neutral current pion events at Super Kamiokande	MARTIN, Dan
15:30	[367] BOLEYN: a testbed for new neutrino detection technologies	SCARFF, Andrew

Parallel Talks: Stream D: Dark matter (13:45 - 15:45)

-Conveners: Xin Ran Liu

time	[id] title	presenter
13:46	[383] The LUX-ZEPLIN (LZ) Experiment	COTTLE, Amy
14:00	[384] Se-Rn-dipitous Seque-LZ: Radon in LZ	ANGELIDES, Nicolas
14:15	[385] Photon Detection in LUX-ZEPLIN (LZ) and LXe TPCs	BAKER, Albert
14:30	[386] Saturation corrections in the LUX-ZEPLIN experiment	AL MUSALHI, Aiham
14:45	[387] Preliminary projected sensitivity of LZ to Majoron-emitting double beta decay modes of ^{136}Xe	TONG, Zhaozhen
15:00	[388] FlameNEST	PALMER, Jordan
15:15	[389] Preparations for the first observation of the Migdal effect	MARLEY, Timothy
15:30	[390] Exploring the current and future physics potential of liquid noble direct dark matter detection experiments	SANDFORD, Ellen

Tuesday, 5 April 2022

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

-Conveners: Veronique Boisvert

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

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

-Conveners: Chris White

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

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

-Conveners: Teppei Katori

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

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

-Conveners: Theresa Fruth

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

Wednesday, 6 April 2022

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

-Conveners: Tracey Berry

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

-Conveners: Matthew Needham

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

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

-Conveners: Jaroslaw Nowak

time	[id] title	presenter
11:00	[373] The Nue/Numu Ratio within the NuMI Beam	MOOR, Alexandra
11:15	[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	[375] Searching for an Improved NOvA 3-flavour Neutrino Oscillation Analysis Event Selection	MIKOLA, Veera
11:45	[376] Transverse Kinematic Imbalance study in ProtoDUNE-SP for the interaction proton - argon	VERGANI, Stefano
12:00	[377] Development of the Pandora LArTPC event reconstruction to optimise the sensitivity to CP violation at DUNE	MAWBY, Isobel
12:15	[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 - 12:30)**-Conveners: Teppei Katori**

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

Parallel Talks: Stream A: LHC $t\bar{t}+X$ (13:30 - 14:30)**-Conveners: Sarah Williams**

time	[id] title	presenter
13:30	[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
13:45	[333] Boosting the Higgs with $t\bar{t}H(bb)$, using the ATLAS detector	BORBELY, Albert
14:00	[334] Search for Four Top Quark Production at CMS	STYLIANOU, Nicolas
14:15	[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 (13:30 - 14:30)**-Conveners: Paula Alvarez**

time	[id] title	presenter
13:30	[356] Mixing and CP violation with $D_0 \rightarrow K\pi\pi$ at the LHCb experiment	HILTON, Martha HILTON, Martha HILTON, Martha
13:45	[357] Search for local CP violation in the phase-space of $D \rightarrow \pi\pi\pi$ decays using the energy test with LHCb Run 2 data	COBBLEDICK, John
14:00	[358] Five-dimensional phase-space efficiency in $D \rightarrow K3\pi$ at LHCb for precision CP violation measurements	LANE, Richard
14:15	[359] Beauty to doubly open charm decays with the LHCb detector	BISHOP, Fionn

Parallel Talks: Stream C: neutrino detectors (13:30 - 14:30)**-Conveners: Matthew Malek**

time	[id] title	presenter
13:30	[379] Large Area Picosecond Photodetectors for future neutrino detectors	FOSTER, Robert
13:45	[380] A new easily scalable readout system for distributed photomultiplier detector networks	MÁNEK, Petr
14:00	[381] Event by Event Directional Reconstruction in the SNO+ Scintillator Phase	PATON, Josephine

14:15	[382] A Statistical Approach to Modelling the Optical Scattering Calibration System in SNO+	COOKMAN, Daniel
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Parallel Talks: Stream D: muon physics (13:30 - 14:30)

-Conveners: Kostas Nikolopoulos

time	[id] title	presenter
13:30	[403] Measuring the anomalous precession frequency of the muon with the Muon g-2 tracking detectors	SWEETMORE, George
13:45	[404] Searching for a muon EDM at the new g-2 experiment at Fermilab	VASILKOVA, Dominika
14:00	[405] Physics Validations of Simulations for the COMET Low-Energy, Neutrinoless μ -e Conversion Experiment	DERVENI, Roden
14:15	[406] Track pileup mitigation using a one-dimensional maximum likelihood fit for the Mu3e experiment	GAYTHER, Benjamin