24th Australian Institute of Physics Congress

Monday, 12 December 2022

AIP: Nuclear and Particle Physics: NUPP 1 - Hall C (11:00 - 12:30)

-Conveners: Anthony Williams

time	[id] title	presenter
11:00	[843] First FRIB experiment: new microsecond isomer in 32Na discovered with the FDSi	Dr GRAY, Timothy
11:30	[225] Lattice QCD Determination of Transverse Force Distributions in the Proton	CRAWFORD, Joshua
11:45	[127] Using TDHF simulations of quasifission to probe the fission surface of Og-294	MCGLYNN, Patrick
12:00	[236] Pyrate: a novel system for data transformations, reconstruction and analysis for the SABRE experiment	MEWS, Michael
12:15	[623] Searches for Long-Lived Particles using Displaced Vertices and Missing Transverse Energy at the ATLAS Detector	FILMER, Emily

AIP: Nuclear and Particle Physics: NUPP 2 - Hall C (14:00 - 15:30)

-Conveners: Derek Leinweber

time	[id] title	presenter
14:00	[487] Internal structure of the nucleon through global QCD analysis	MELNITCHOUK, Wally
14:30	[308] Studying the role of multi-parton interactions in the production of doubly-heavy hadrons in proton-proton collisions	HADAVIZADEH, Tom
14:45	[511] Low-lying Odd-parity Nucleon Resonances in Hamiltonian Effective Field Theory	ABELL, Curtis
15:00	[317] The Compton amplitude and structure functions of the nucleon	CAN, K. Utku
15:15	[282] The Role of Vector Boson Fusion in the Production of Heavy Vector Triplets at the LHC and HL-LHC	Mr MARTONHELYI, Timothy

AIP: Nuclear and Particle Physics: NUPP 3 - Hall C (16:00 - 17:30)

-Conveners: Nicole Bell

time	[id] title	presenter
16:00	[542] Weak charge of the proton	YOUNG, Ross
16:30	[12] Impact of nuclear structure on nuclear responses to WIMP elastic scattering	SIMENEL, Cedric
16:45	[216] The Quark-Gluon Interactions in Low Energies	KIZILERSU, Ayse
17:00	[206] B Meson Flavour Tagging via Quantum Machine Learning	WEST, Maxwell
17:15	[710] Direct measurement of hexacontatetrapole, E6 γ decay from Fe-53m	MITCHELL, AJ

Tuesday, 13 December 2022

AIP: Nuclear and Particle Physics: NUPP 4 - Hall C (11:00 - 12:30)

-Conveners: Cedric Simenel

time	[id] title	presenter
11:00	[742] Finite volume pionless effective field theory for nuclear systems	DETMOLD, William
11:30	[101] GAMBIT update	BALAZS, Csaba
11:45	[254] The emergent origin of mass	KAMLEH, Waseem
12:00	[116] Testing the Quark Model on the Delta Baryon Spectrum	HOCKLEY, Liam
12:15	[129] Measurement of the branching fraction and CP asymmetry of $B^{0} \to \pi^{0} \pi^{0}$ decays	PHAM, Francis

AIP: Nuclear and Particle Physics: NUPP 5 - Hall C (14:00 - 15:30)

-Conveners: Raymond Volkas

time	[id] title	presenter
14:00	[141] Ways of seeing: maximising the discovery potential of the Large Hadron Collider	WHITE, Martin John
14:30	[24] On the determination of uncertainties in parton densities	HUNT-SMITH, Nicholas
14:45	[300] Sensitivity of the SABRE Experiment to WIMP Signals and Seasonal Backgrounds	LEAVER, Kyle
15:00	[699] Challenging nuclear vibrations with particle-gamma spectroscopy	REECE, Martha
15:15	[540] Fixed Field Accelerators for Particle Therapy	Mr STEINBERG, Adam

Wednesday, 14 December 2022

AIP: Nuclear and Particle Physics: NUPP 6 - Room E3 (16:00 - 17:30)

-Conveners: Geoffrey Taylor

time	[id] title	presenter
16:00	[430] The SABRE South Experiment	BOLOGNINO, Irene
16:30	[25] Latest results from the ATLAS experiment at the CERN LHC	JACKSON, Paul
16:45	[889] Search for Dark Matter in Invisible Higgs Decays with the ATLAS experiment	POTTI, Harish
17:00	[339] VISHv: a unified solution to five SM shortcomings with a protected electroweak scale	SOPOV, Alexei
17:15	[591] Dense Nuclear Matter with Bag Overlap	LEONG, Jesper

Thursday, 15 December 2022

AIP: Nuclear and Particle Physics: NUPP 7 - Room E3 (14:00 - 15:30)

-Conveners: Paul Jackson

time	[id] title	presenter
14:00	[752] SUPL – An underground laboratory for fundamental science in Australia	TAYLOR, Geoffrey Norman
14:15	[33] New proposal for dark photon searches: parity-violating electron scattering	WANG, Xuangong
14:30	[426] Searching for Dark Matter with The ORGAN Experiment: Results, Status, and Future Plans	MCALLISTER, Ben
14:45	[759] Rare leptonic B-decays at the Belle II Experiment	DE LA MOTTE, Shanette
15:00	[733] Study of Exclusive B → π ℓ ν Decays with Hadronic Full-event-interpretation Tagging in Belle II Data and Extraction of |Vub|	Ms TOUTOUNJI, Nadia
15:15	[287] Intrinsic Background Characterisation of an Ultra-pure NaI test Crystal for SABRE South	DASTGIRI, Ferdos

AIP: Nuclear and Particle Physics: NUPP 8 - Room E3 (16:00 - 17:30)

-Conveners: Ross Young

time	[id] title	presenter
16:00	[756] Electric monopole transitions in nuclei	KIBEDI, Tibor
16:30	[349] Impact of dynamical fermions on the centre-vortex structure of QCD ground-state fields	LEINWEBER, Derek
16:45	[298] Mapping the 3D structure of hadrons with lattice quantum chromodynamics	HANNAFORD GUNN, Alec
17:00	[496] Pulse Shape Discrimination of low-energy nuclear and electron recoils in NaI:Tl for dark matter direct-detection	SPINKS, Nathan
17:15	[410] The Nuclear EMC Effect	XING, Wanli

Friday, 16 December 2022

AIP: Nuclear and Particle Physics: NUPP 9 - Room E3 (09:00 - 10:30)

-Conveners: Csaba Balazs

time	[id] title	presenter
09:00	[447] Characterizing and Modelling Weakly Collective Nuclei - Puzzles and Progress	STUCHBERY, Andrew
09:30	[303] Radio Frequency Breakdown Analysis at CERN's High Gradient Test Stands: a Machine Learning approach	Mr PUSHKARNA, Paarangat
09:45	[470] Study of ttH production at the HL-LHC	CARR, Isabel Beth
10:00	[588] Searches for Supersymmetric BSM particles via Strong Production at ATLAS	RUGGERI, Tristan Andrew
10:15	[702] Defining and identifying pre-collective nuclei through electromagnetic transitions and moments	COOMBES, Ben