

# **International Conference on Neutrinos and Dark Matter (NuDM- 2024)**



## **Report of Contributions**

Contribution ID: 1

Type: **not specified**

# Prospects for discovering LNV at the LHC and beyond

**Presenter:** RUIZ, Richard

**Session Classification:** Neutrino Experimental

Contribution ID: 2

Type: **not specified**

## **Double weak decay searches in the PandaX-4T experiment**

*Thursday 12 December 2024 15:30 (25 minutes)*

**Presenter:** WANG, Shaobo

**Session Classification:** Neutrino Theory

Contribution ID: 3

Type: **not specified**

## **Lepton masses and mixing in modular groups**

**Presenter:** ABBAS, Mohammed

**Session Classification:** Neutrino Experimental

Contribution ID: 4

Type: **not specified**

## **Neutrino physics with liquid scintillator detectors: the case of Borexino and JUNO**

*Wednesday 11 December 2024 09:00 (25 minutes)*

**Presenter:** LUDHOVA, Livia

**Session Classification:** Neutrino Experimental

Contribution ID: 5

Type: **not specified**

## Dark Dimension cosmology

*Wednesday 11 December 2024 11:30 (25 minutes)*

**Presenter:** ANTONIADIS, Ignatios

**Session Classification:** Dark Matter Theory

Contribution ID: 6

Type: **not specified**

## **Implications of Sgr\,A\* on the $\gamma$ -rays searches of Bino Dark Matter with $(g - 2)_\mu$**

*Wednesday 11 December 2024 12:00 (25 minutes)*

**Presenter:** CHATTOPADHYAY, Utpal

**Session Classification:** Dark Matter Theory

Contribution ID: 7

Type: **not specified**

## **Four scalar fields and $f(Q)$ gravity theory**

*Wednesday 11 December 2024 12:30 (25 minutes)*

**Presenter:** NASHED, Gamal

**Session Classification:** Dark Matter Theory



Contribution ID: 8

Type: **not specified**

## **Pati-Salam Model in Curved Space-Time and Einstein-Cartan Gravity**

*Wednesday 11 December 2024 16:30 (25 minutes)*

**Presenter:** LI, Desheng

**Session Classification:** Neutrino Theory

Contribution ID: 9

Type: **not specified**

## Exotic Searches at ATLAS

**Presenter:** TAFIROUT, Reda

**Session Classification:** Neutrino Theory

Contribution ID: **10**

Type: **not specified**

## **Exploring coherent elastic neutrino-nucleus scattering with NUCLEUS experiment**

**Presenter:** CASALI, Nicola

**Session Classification:** Neutrino Theory

Contribution ID: 11

Type: **not specified**

## **Neutrinoless double beta decay search and dark matter search with KamLAND-Zen**

**Presenter:** HATA, Kazumi

**Session Classification:** Neutrino Theory

Contribution ID: 12

Type: **not specified**

## **Pursuing Sources of Cosmic High-energy Neutrinos**

**Presenter:** KIMURA, Shigeo

**Session Classification:** Neutrino Theory

Contribution ID: 13

Type: **not specified**

## **Pursuing Sources of Cosmic High-energy Neutrinos**

**Presenter:** KIMURA, Shigeo

**Session Classification:** Neutrino Experimental

Contribution ID: 14

Type: **not specified**

## **The KM3NeT detector: first results and perspectives**

*Wednesday 11 December 2024 09:30 (25 minutes)*

**Presenter:** MARGIOTTA, Annarita

**Session Classification:** Neutrino Experimental

Contribution ID: 15

Type: **not specified**

# Prospects for discovering LNV at the LHC and beyond

*Wednesday 11 December 2024 15:00 (25 minutes)*

**Presenter:** RUIZ, Richard

**Session Classification:** Neutrino Theory



Contribution ID: 16

Type: **not specified**

## **Non-thermal Dark Matter in U(1)<sub>{B-L}</sub> Extension of Inert Doublet Model**

*Wednesday 11 December 2024 15:30 (25 minutes)*

**Presenter:** BINJONAIID, Maien

**Session Classification:** Neutrino Theory

Contribution ID: 17

Type: **not specified**

## **Lepton masses and mixing in modular groups**

*Wednesday 11 December 2024 16:00 (25 minutes)*

**Presenter:** ABBAS, Mohammed

**Session Classification:** Neutrino Theory

Contribution ID: **18**

Type: **not specified**

## **Neutrinos as possible probes for quantum gravity**

*Wednesday 11 December 2024 13:00 (25 minutes)*

**Presenter:** CLAUDIO TORRI, Marco Danilo

**Session Classification:** Dark Matter Theory

Contribution ID: **19**

Type: **not specified**

## **The Darkside-20k experiment**

*Thursday 12 December 2024 09:00 (25 minutes)*

**Presenter:** ALEJANDRO TABORDA, Oscar

**Session Classification:** Dark Matter Experimental

Contribution ID: 20

Type: **not specified**

# **Antimatter Gravitation and Dark Matter searches at the CERN Antiproton**

*Thursday 12 December 2024 09:30 (25 minutes)*

**Presenter:** GIAMMARCHI, Marco

**Session Classification:** Dark Matter Experimental

Contribution ID: **21**

Type: **not specified**

## **LS+fiber module for cosmic ray muon**

*Thursday 12 December 2024 10:30 (25 minutes)*

**Presenter:** WANG, Zhimin

**Session Classification:** Dark Matter Experimental

Contribution ID: 22

Type: **not specified**

## **Dark Matter Interactions in White Dwarfs: A Multi-Energy Approach to Capture Mechanisms**

*Thursday 12 December 2024 10:00 (25 minutes)*

**Presenter:** HOR, Shihwen

**Session Classification:** Dark Matter Experimental

Contribution ID: 23

Type: **not specified**

## **Probing pseudo-Nambu-Goldstone dark matter evading direct detection bounds**

**Presenter:** TOMA, Takashi

**Session Classification:** Neutrino Experimental



Contribution ID: 24

Type: **not specified**

## **ASTAROTH: an innovative detector with Silicon Photomultipliers and NaI(Tl) crystals for the direct detection of DM**

**Presenter:** TOSO, Valerio

**Session Classification:** Neutrino Experimental

Contribution ID: 25

Type: **not specified**

## **Can teleparallel $f(T)$ models play a bridge between early and late time Universe?**

**Presenter:** SWAGAT MISHRA, Sai

**Session Classification:** Neutrino Experimental

Contribution ID: 26

Type: **not specified**

## **Revisiting Clockwork scalar and Fermion Model: A Review of Theoretical Foundations and Experimental Progress**

**Presenter:** GHOSH, Gayatri

**Session Classification:** Neutrino Experimental

Contribution ID: 27

Type: **not specified**

## **MicroBooNE Recent Results**

*Thursday 12 December 2024 15:00 (25 minutes)*

**Presenter:** MARTYNENKO, Sergey

**Session Classification:** Neutrino Theory

Contribution ID: 28

Type: **not specified**

## **Light vector mediators at direct detection experiments**

*Wednesday 11 December 2024 10:30 (25 minutes)*

**Presenter:** DE ROMERI, Valentina

**Session Classification:** Neutrino Experimental

Contribution ID: 29

Type: **not specified**

## **Parity solution to the strong CP problem without axion and a unified theory of neutrino mass, dark matter, baryogenesis and inflation**

*Thursday 12 December 2024 16:00 (25 minutes)*

**Presenter:** MOHAPATRA, Rabindra

**Session Classification:** Neutrino Theory

Contribution ID: **30**

Type: **not specified**

## **Right handed sneutrino contribution in $B \rightarrow D^{(*)} l \bar{\nu}_l$ decays**

*Thursday 12 December 2024 16:30 (25 minutes)*

**Presenter:** BOUBAA, Dris

**Session Classification:** Neutrino Theory

Contribution ID: **31**

Type: **not specified**

## **Exotic Searches at ATLAS**

*Friday 13 December 2024 09:00 (25 minutes)*

**Presenter:** TAFIROUT, Reda

**Session Classification:** Neutrino Experimental



Contribution ID: 32

Type: **not specified**

## **Exploring coherent elastic neutrino-nucleus scattering with NUCLEUS experiment**

*Friday 13 December 2024 09:30 (25 minutes)*

**Presenter:** CASALI, Nicola

**Session Classification:** Neutrino Experimental

Contribution ID: 33

Type: **not specified**

## **Neutrinoless double beta decay search and dark matter search with KamLAND-Zen**

*Friday 13 December 2024 10:00 (25 minutes)*

**Presenter:** HATA, Kazumi

**Session Classification:** Neutrino Experimental

Contribution ID: 34

Type: **not specified**

# **Matter-antimatter asymmetry study using the European Spallation Source neutrino Super Beam**

*Saturday 14 December 2024 13:00 (25 minutes)*

**Presenter:** DRACOS, M.

**Session Classification:** Dark Matter Experimental

Contribution ID: 35

Type: **not specified**

## **Probing Neutrino Charge Radii with Coherent Elastic Solar Neutrino-Nucleus Scattering**

**Presenter:** BAŞLI, Onur

**Session Classification:** Neutrino Theory

Contribution ID: 36

Type: **not specified**

## **Development of calibration method and performance evaluation for KamLAND2 prototype detector**

**Presenter:** NAKANE, Jun

**Session Classification:** Neutrino Theory

Contribution ID: 37

Type: **not specified**

## **Manifestations of Quark-less Baryonium Dark Matter**

**Presenter:** PISKOUNOVA, Olga

**Session Classification:** Neutrino Theory

Contribution ID: 38

Type: **not specified**

## **Feasibility of dark matter admixed neutron star based on recent observational constraints**

**Presenter:** THAKUR, Prashant

**Session Classification:** Neutrino Theory

Contribution ID: 39

Type: **not specified**

## **Probing Neutrino Charge Radii with Coherent Elastic Solar Neutrino-Nucleus Scattering**

*Friday 13 December 2024 14:30 (25 minutes)*

**Presenter:** BAŞLI, Onur

**Session Classification:** Neutrino Experimental



Contribution ID: 40

Type: **not specified**

## **Development of calibration method and performance evaluation for KamLAND2 prototype detector**

*Friday 13 December 2024 10:30 (25 minutes)*

**Presenter:** NAKANE, Jun

**Session Classification:** Neutrino Experimental

Contribution ID: 41

Type: **not specified**

# Manifestations of Quark-less Baryonium Dark Matter

*Saturday 14 December 2024 15:30 (25 minutes)*

**Presenter:** PISKOUNOVA, Olga

**Session Classification:** Dark Matter Experimental

Contribution ID: 42

Type: **not specified**

## **Feasibility of dark matter admixed neutron star based on recent observational constraints**

*Saturday 14 December 2024 09:00 (25 minutes)*

**Presenter:** THAKUR, Prashant

**Session Classification:** Neutrino Theory

Contribution ID: 43

Type: **not specified**

## **Dark sector states —current searches and prospects**

*Saturday 14 December 2024 11:30 (25 minutes)*

**Presenter:** ASSAMAGAN, Ketevi

**Session Classification:** Dark Matter Experimental

Contribution ID: 44

Type: **not specified**

## Exploring Dark Matter and Neutrinos with XENONnT

*Saturday 14 December 2024 12:00 (25 minutes)*

**Presenter:** SINGH, Riya

**Session Classification:** Dark Matter Experimental

Contribution ID: 45

Type: **not specified**

## **The search for low-mass dark matter via nuclear recoil in the SuperCDMS SNOLAB experiment**

*Saturday 14 December 2024 12:30 (25 minutes)*

**Presenter:** SADEK, David

**Session Classification:** Dark Matter Experimental

Contribution ID: 46

Type: **not specified**

## **Reheating via non-Abelian, strongly self-interacting dark sectors**

*Saturday 14 December 2024 09:30 (25 minutes)*

**Presenter:** BIONDINI, Simone

**Session Classification:** Neutrino Theory

Contribution ID: 47

Type: **not specified**

## Dark sector searches at Belle II

*Saturday 14 December 2024 16:00 (25 minutes)*

**Presenter:** CORONA, Luigi

**Session Classification:** Dark Matter Experimental



Contribution ID: 48

Type: **not specified**

## **In Search of Dark Matter with MeerKAT Radio Telescope: Insights from Reticulum II dSph**

*Saturday 14 December 2024 16:30 (25 minutes)*

**Presenter:** SEMANE, Shibre

**Session Classification:** Dark Matter Experimental

Contribution ID: 49

Type: **not specified**

## **The di-Higgs Production at LHC@14 In The Hidden SU(2) Vector Dark Matter Model**

*Saturday 14 December 2024 10:00 (25 minutes)*

**Presenter:** NABIL, Baouche

**Session Classification:** Neutrino Theory

Contribution ID: 50

Type: **not specified**

## **Probing pseudo-nambu-Goldstone dark matter evading direct detection bounds**

*Thursday 12 December 2024 11:30 (25 minutes)*

**Presenter:** TOMA, Takashi

**Session Classification:** Dark Matter Theory

Contribution ID: 51

Type: **not specified**

## **ASTAROTH: an innovative detector with Silicon Photomultipliers and NaI(Tl) crystals for the direct detection of DM**

*Thursday 12 December 2024 12:00 (25 minutes)*

**Presenter:** TOSO, Valerio

**Session Classification:** Dark Matter Theory

Contribution ID: 53

Type: **not specified**

## Can teleparallel $f(T)$ models play a bridge between early and late time Universe?

*Thursday 12 December 2024 12:30 (25 minutes)*

**Presenter:** SWAGAT MISHRA, Sai

**Session Classification:** Dark Matter Theory

Contribution ID: **60**

Type: **not specified**

# **Revisiting Clockwork scalar and Fermion Model: A Review of Theoretical Foundations and Experimental Progress**

*Thursday 12 December 2024 13:00 (25 minutes)*

**Presenter:** GHOSH, Gayatri

**Session Classification:** Dark Matter Theory

Contribution ID: **61**

Type: **not specified**

## **Dark matter at the LHC with the CMS**

*Saturday 14 December 2024 15:00 (25 minutes)*

**Presenter:** SAVINA, Mariia (Joint Institute for Nuclear Research (RU))

**Session Classification:** Dark Matter Experimental

Contribution ID: 62

Type: **not specified**

## **Dark matter and new physics searches in first KM3NeT data**

*Wednesday 11 December 2024 10:00 (25 minutes)*

**Presenter:** REBECCA GOZZINI, Sara

**Session Classification:** Neutrino Experimental



Contribution ID: 65

Type: **not specified**

## **Enhancing $0\nu 2\beta$ Detection: The CROSS demonstrator's design and sensitivity goals**

*Friday 13 December 2024 12:30 (25 minutes)*

**Presenter:** CINTAS, David

**Session Classification:** Neutrino Experimental

Contribution ID: **69**

Type: **not specified**

## **Pursuing Sources of Cosmic High-energy Neutrinos**

*Friday 13 December 2024 13:00 (25 minutes)*

**Presenter:** KIMURA, Shigeo

**Session Classification:** Neutrino Experimental

Contribution ID: 70

Type: **not specified**

# Searching for Neutrinoless Double Beta Decay with KamLAND-Zen: Latest Results and Future Prospects

*Friday 13 December 2024 13:30 (25 minutes)*

**Presenter:** PENEK, Ömer

**Session Classification:** Neutrino Experimental

Contribution ID: 71

Type: **not specified**

## **Decade work results from the NOvA experiment**

*Friday 13 December 2024 11:00 (25 minutes)*

**Presenter:** SAMOYLOV, Oleg (Joint Institute for Nuclear Research (RU))

**Session Classification:** Neutrino Experimental

Contribution ID: 72

Type: **not specified**

## **Probing the Sterile Neutrino Dipole Portal with Coherent Elastic Solar Neutrino- Nucleus Scattering**

*Friday 13 December 2024 14:00 (25 minutes)*

**Presenter:** MUSTAMIN, M

**Session Classification:** Neutrino Experimental

Contribution ID: 73

Type: **not specified**

# The Inert Doublet Model and Extensions: Insights into Dark Matter and Electroweak Physics

*Saturday 14 December 2024 10:30 (25 minutes)*

**Presenter:** OKBA, Bradji

**Session Classification:** Neutrino Theory

Contribution ID: 74

Type: **not specified**

## Partial $\mu - \tau$ symmetry from kinetic normalization

*Friday 13 December 2024 15:00 (25 minutes)*

**Presenter:** CHAMOUN, Nidal

**Session Classification:** Neutrino Experimental