

Session Program

5-9 Dec 2022

The Dark Side of the Universe DSU2022

Dark matter

Monday 5 December

14:00

Dark matter

Session | **Location:** Old Main Building, 230 | **Convener:** Theresa Fruth

14:00–14:20 **First results from the LUX-ZEPLIN (LZ) dark matter experiment**

Speaker

Nishat Parveen

14:20–14:40 **XENONnT Dark Matter Experiment: Recent Status and Latest Results**

Speaker

Dr Yajing Xing

14:40–15:00 **Direct dark matter searches in XMASS-I**

Speaker

Atsushi Takeda

15:00–15:20 **DARWIN: a liquid xenon observatory for rare events physics searches**

Speaker

Dr Sara Diglio

15:20–15:40 **DarkSide-20k and the Direct Dark Matter Search with Liquid Argon**

Speaker

Thomas Nathan Thorpe

15:40

16:10

Dark matter

Session | **Location:** Old Main Building, 230 | **Convener:** Sara DIGLIO

16:10–16:30 **ANAIS-112: testing the DAMA/LIBRA signal beyond 3 sigma**

Speaker

Maria Martinez

16:30–16:50

Cryogenic NaI based remoTES calorimeters for direct dark matter detection in COSINUS

Speaker

Mukund Raghunath Bharadwaj

16:50–17:10 **Impact of quenching factor models on tests of DAMA**

Speaker

Madeleine Zurowski

17:10–17:30

Radio-impurity studies for dark matter detection with the SABRE South experiment

Speaker

Dr Zuzana Slavkovska

17:30-17:50

R11065 Crystal Photomultiplier Contribution to the SABRE South Experimental Background

Speaker

William Melbourne

17:50

Tuesday 6 December

14:00

Dark matter

Session | **Location:** Old Main Building, 230 | **Convener:** Giorgio Busoni

14:00–14:20

CYGNUS-Oz development of directional dark matter detection capabilities using a gaseous time projection chamber for the Cygnus experiment

Speaker

Ferdos Dastgiri

14:20–14:40

Precise predictions and new insights for the Migdal effect

Speaker

Peter Cox

14:40–15:00

Light dark matter: Theory and Chemistry

Speaker

Tom Melia

15:00–15:20

Scintillating Bubble Chambers for GeV-Scale Dark Matter Searches

Speaker

Prof. Russell Neilson

15:20–15:40

GLIMPSE: Graphene-based Light Invisible Matter Particle SEarch

Speaker

Jong-Chul Park

15:40

16:10

Dark matter

Session | **Location:** Old Main Building, 230 | **Convener:** Michael Klasen

16:10–16:30

Impact of precision calculations in Simplified t channel Dark Matter models

Speaker

Dipan Sengupta

16:30–16:50

Improved theoretical predictions of the dark matter relic abundance

Speaker

Luca Paolo Wiggeling

16:50–17:10

Global Fits of vector-mediated simplified models for Dark Matter

Speaker

Christopher Chang

17:10–17:30

Radiative Neutrino Mass with GeV Scale Majorana Dark Matter in Scotogenic Model

Speaker

Avnish .

17:30–17:50

Composite dark matter from non-abelian gauge theories with real representations

Speaker

Joachim Pomper

17:50

Thursday 8 December

14:00

Dark matter

Session | **Location:** Old Main Building, 230 | **Convener:** Dr Peter Cox

14:00–14:20

Observational evidence of dark matter within the quark nugget model

Speaker

Dr Igor Samsonov

14:20–14:40

The effects of source morphology on machine learnings ability to identify dark matter substructure in strong gravitational lenses.

Speaker

Tyler Hughes

14:40–15:00

Merging clusters as a test-bed for self-interacting dark matter

Speaker

Ellen Sirks

15:00–15:20

Thermal WIMPs and the Scale of New Physics

Speaker

Dr Ankit Beniwal

15:20

16:10

Dark matter

Session | **Location:** Old Main Building, 230 | **Convener:** Dr Ankit Beniwal

16:10–16:30

Observational signatures of compact dark stars

Speaker

Alejandro Ibarra

16:30–16:50

Capture of DM in Compact Stars

Speaker

Giorgio Busoni

16:50–17:10

Neutron Star Heating and the (g-2)_{muon} Discrepancy

Speaker

Maura Elizabeth Ramirez Quezada

17:10–17:30

Dark Matter in Compact Objects

Speaker

Michael Virgato

17:30