

## **Session Program**

**30 January 2024 to 29 February 2024**

*APS-UH and the UH Department of Physics  
present...*

# Physics Research Day

Saturday, Feb. 24  
8am - 5pm  
Farish Hall



## **UH Physics Research Day - 2024**

### ***Poster Session***

University of Houston - Main Campus  
101 Farish Hall

## Tuesday 30 January

12:30

### Poster Session: Poster Session

**Session** | **Location:** University of Houston - Main Campus, 101 Farish Hall | **Convener:** Greg Morrison

12:30–12:35

#### **Muon Neutrino - Nucleus Charge Current Interactions with Low Hadronic Activity Cross Section Measurements with NOvA**

**Speaker**

James Lesmeister

12:35–12:40

#### **A Lock-in-Amplifier system for performing Intensity Modulated Photovoltage Spectroscopy measurement in photoelectrochemical cells, tested on TiO<sub>2</sub> thin films**

**Speaker**

Lilly Schaffer

12:40–12:45

#### **Investigating the Magnetic Ordering and Atomic Structure of Strained CrSBr by Neutron Diffraction**

**Speaker**

Uchenna Ubeh

12:45–12:50

#### **Electronic structure analysis of air stable 2D magnet CrSBr using RIXS**

**Speaker**

Jayajeewana Ranhili Pelige

12:50–12:55

#### **Effects of Curvature on the Conformational Properties of Confined Semi-Flexible Polymers**

**Speaker**

Joel Gard

12:55–13:00

#### **AI-SNIPS: A Platform for Network Intelligence-Based Pharmaceutical Security**

**Speaker**

Mr Timothy Burt

13:00–13:05

#### **Entanglement degradation in a bipartite system with a finite lifetime observer**

**Speaker**

Pablo Lopez-Duque

13:05–13:10

#### **A brief overview of Systematics and their implementation in the T2K P0D**

**Speaker**

Donnie Munford

13:10-13:15

**Investigating the Local Structure of MoTe<sub>2</sub> Using Atomic Pair Distribution Function and EXAFS Techniques.****Speaker**

Mr Sumit Khadka

13:15-13:20

**Fundamental Constitutive Effects of Anomalous Diffusion in Lévy Walk****Speaker**

Abhijit Bera

13:20-13:30

**Introduction to Edge-Illumination X-ray Phase Contrast Imaging****Speaker**

Jingcheng Yuan

13:30-13:50

**Measuring Charmed baryon to meson ratio at ALICE experiment, investigation for hadronization****Speaker**

Oveis Sheibani

13:50-14:10

**Role of scattering in the prediction of simulation based optical properties of dielectric TiO<sub>2</sub> nanotubular materials.****Speaker**

David Waligo

14:10-14:30

**Fe doping and electrochemical reconstruction in Ni&Ni<sub>0.2</sub>Mo<sub>0.8</sub>N for large current density alkaline seawater electrolysis****Speaker**

Minghui Ning

14:30-14:50

**Muyuan He Atmospheric neutrino abstract****Speaker**

Muyuan He

14:50-15:10

**Synthesis of cubic boron arsenide single crystal with ultrahigh thermal conductivity****Speaker**

Fengjiao Pan

15:10-15:30

**Module Readiness Tests and Data Quality Management for DUNE Near Detector****Speaker**

Dat Tran

15:30-15:40

**Photoacoustic laser streaming for liquid handling operations.****Speaker**

Paththini Kuttige nonis