

Session Program

16-19 May 2023

**The Mitchell Conference on Collider, Dark
Matter, and Neutrino Physics 2023**

Collider

Texas A&M University, Hawking Auditorium

Monday 15 May

14:05

Collider

Session | **Location:** Texas A&M University, Hawking Auditorium | **Convener:** Kuver Sinha

14:05–14:30

Status and Prospect of Search for Dark Matter

Speaker

Deepak Kar

14:30–14:55

Multi-photon decays of the Higgs boson at the LHC

Speaker

Ian Lewis

14:55–15:20

First FASER Physics Results

Speaker

Deion Elgin Fellers

15:20–15:45

A Novel Beam Dump Experiment at CMS

Speaker

Hyunyong Kim

15:45

16:15

Collider

Session | **Location:** Texas A&M University, Hawking Auditorium | **Convener:** Prof. Joel Walker

16:15–16:40

Searching for Higgs boson pairs at the Large Hadron Collider

Speaker

Jason Robert Veatch

16:40–17:05

Charged Higgs Boson Search via $e^+e^- \rightarrow H^+H^- \rightarrow c\bar{b}c\bar{b}$ at Linear Colliders

Speaker

George Hou

17:05–17:30

Higgs couplings to fermions

Speaker

Tao Han

17:30–17:55

Stepped Partially Acoustic Dark Matter (SPartAcous)

Speaker

Taewook Youn

17:55

Tuesday 16 May

11:15

Collider

Session | **Location:** Texas A&M University, Hawking Auditorium | **Convener:** Hyunyong Kim

11:15–11:35 **The CDF W Boson Mass Measurement**

Speaker

Ashutosh Kotwal

11:35–11:50 **One man's thoughts a year after the CDF W Mass Announcement**

Speaker

David Toback

11:50–12:15

Precise SM measurements as BSM probes: a new purpose for the W mass measurement

Speaker

Lorenzo Ricci

12:15–12:40 **Heavy neutral leptons at muon colliders**

Speaker

Zhen Liu

12:45

14:05

Collider

Session | **Location:** Texas A&M University, Hawking Auditorium | **Convener:** Ian Lewis

14:05–14:30

Highlights of Search for New Particles (Vector-like Quarks/Leptoquark/W'/Z')

Speaker

Atanu Pathak

14:30–14:55 **Status and Prospect of Search for Long-Lived Particles**

Speaker

Mr Soumyananda Goswami

14:55–15:20 **Probing Lepton Number Violation at the LHC**

Speaker

Kaladi Babu

15:20–15:45 **Entanglement and Bell's Inequalities with boosted top quark pairs**

Speaker

Dorival Gonçalves

15:45

16:15

Collider

Session | **Location:** Texas A&M University, Hawking Auditorium | **Convener:** Zhen Liu

16:15–16:40

Energy-peak based method to measure top quark mass via B-hadron decay lengths

Speaker

Kaustubh Agashe

16:40–17:05 **Understanding Jet Charge**

Speaker

Andrew Larkoski

17:05–17:30

Jet SIFT-ing: a new scale-invariant jet clustering algorithm for the substructure era

Speaker

Prof. Joel Walker

17:30–17:55

Anomalous Triple Gauge Couplings in Electroweak Dilepton Tails at the LHC and Interference Resurrection

Speaker

Minho SON

17:55