

## **Session Program**

**7-10 Oct 2025**



## **CPAD 2025 at Penn**

### ***SHARED SESSION***

Inn at Penn, University of Pennsylvania  
3600 Sansom Street, Philadelphia, Pa 19104

## Wednesday 8 October

11:00

### SHARED SESSION: RDC 3&4 Solid State & ASICS

**Session** | **Location:** Woodlands AB

11:00–11:20

#### ePIC Silicon Vertex Tracker for the EIC - The Largest MAPS-Based Detector

**Speaker**

Grzegorz Deptuch

11:20–11:40

#### Measuring Beta Particle Momentum with CMOS Sensors and Scintillating Detectors for Sterile Neutrino Detection

**Speaker**

Daniel Kodroff

11:40–12:00

#### Laboratory characterization of ARCADIA MAPS sensors, and status of future developments at Fermilab

**Speaker**

Artur Apresyan

12:00–12:20

#### Megapixel Monolithic Active Pixel Sensor Prototype with Event-Driven Readout and Pathway to Electro-Photonic Integration

**Speaker**

Grzegorz Deptuch

12:20–12:40

#### MAPS with improved timing performance for low-duty cycle accelerators

**Speaker**

Lorenzo Rota

12:40

14:00

### SHARED SESSION: RDC 3&4&11 Solid State & ASICS & Fast Timing

**Session** | **Location:** Woodlands AB

14:00–14:20

#### ML processing and compression of signal shared AC-LGADs

**Speaker**

Samantha Sunnarborg

14:20–14:40

#### Towards 6D Tracking: using fast-timing to determine track position, time, and angles

**Speaker**

Victor Turbiner

14:40–15:00

#### Development of AC-LGAD Detectors for Electron-Ion Collider

**Speaker**

Yu Hu

15:00-15:20

### Performance of AC-LGADs for ePIC and beyond

**Speaker**

Dr Simone Michele Mazza

15:20-15:40

### 5D tracking active target development for the PIONEER experiment

**Speaker**

Dr Simone Michele Mazza

15:40-16:00

### Stress Tests on Low Gain Avalanche Diodes and AC-coupled Low Gain Avalanche Diodes

**Speaker**

Trevor Russell

16:00-16:20

### Mortality of ultra-thin LGADs from high energy deposition

**Speaker**

Abraham Tishelman-Charny

16:20

16:30

## SHARED SESSION: RDC 3&4&11 Solid State & ASICS & Fast Timing

**Session** | **Location:** Woodlands AB

16:30-16:50

### Response of AC-LGADs to Ionizing and Non-ionizing Radiation Damage

**Speaker**

Sally Seidel

16:50-17:10

### Optimization of Ultrafast Silicon Detectors for Timing Applications in Future High Luminosity Collider Experiments

**Speaker**

Bridget Mack

17:10-17:30

### Design and characterization of the FCFD chip for strip AC-LGAD readout

**Speaker**

Artur Apresyan

17:30-17:50

### Characterization of Low Gain Avalanche Diodes Using Diverse Particle Beams

**Speaker**

Mohamed Hijas Mohamed Farook

17:50-18:10

### Design and characterization of 28nm readout ASICs for 3D-integrated LGAD sensors

**Speaker**

Bojan Markovic

18:10-18:30

### Performance of HPSoCv2: measurements on a very high Channel Density Waveform Digitizer with sub-10ps resolution

**Speaker**

Dr Luca Macchiarulo

18:30–18:50

**Optical Characterization of Low-Gain Avalanche Diodes**

**Speaker**

Gabriele Giacomini

18:50

# Thursday 9 October

11:00

## SHARED SESSION: RDC 1&2&7 Noble & Photo & Low background

Session | Location: Woodlands AB

11:00–11:20

### Development of pTP Coatings for Wavelength Shifter with Industrial Scale in LAr Detectors

#### Speaker

Yichen Li

11:20–11:40

### Quartz fluorescence backgrounds in liquid xenon TPCs

#### Speaker

Dr Peter Sorensen

11:40–12:00

### Testing of the CRYO ASIC for in-liquid-xenon ionization readout

#### Speaker

Dr Brian Lenardo

12:00–12:20

### Development of an Ultrasensitive ICP-MS Assay Method for the Determination of Uranium, Thorium and Potassium in Gadolinium Used in Scintillator Materials

#### Speaker

Isaac Arnquist

12:30

14:00

## SHARED SESSION: RDC 4&5 ASICS & TDAQ

Session | Location: Woodlands CD

14:00–14:20

### Aligning data to better than one picosecond.

#### Speaker

Roger Rusack

14:20–14:40

### Generic Hardware Platform for future high-bandwidth detector readout

#### Speaker

Shaochun Tang

14:40–15:00

### High Speed DAQ Solution for Small-scale Particle Physics Experiment

#### Speakers

Dr Pranava Surukuchi, Yuvaraj Elangovan

15:00–15:20

### SparsePixels: Efficient Convolution for Sparse Data on FPGAs

#### Speaker

Ho Fung Tsoi

15:20–15:40

### On-sensor regression of particle kinematics

#### Speaker

Jennet Elizabeth Dickinson

15:40–16:00

**PQuant: Streamlining ML Model Compression to Deployment for Next-Gen Detector Systems****Speaker**

Arghya Ranjan Das

16:00

14:00

**SHARED SESSION: RDC 7&8 Low background & Quantum****Session** | **Location:** Woodlands AB

14:00–14:20

**Toward a general-purpose ultra-low-external interference quantum device holder****Speaker**

Yen-Yung Chang

14:20–14:40

**Calibrating Interactions in Low-Threshold, Phonon-Mediated Qubit Detectors****Speaker**

Grace Bratrud

14:40–15:00

**Effect of Defect Formation on Low-Threshold Detector Physics****Speaker**

Nader Mirabolfathi

15:00–15:20

**Stored energy releases: material problem in dark matter search and quantum computing****Speaker**

sergey pereverzev

15:20–15:40

**Suppressing high energy events in superconducting devices in a shallow underground laboratory****Speaker**

Jacob Bargemann

15:40–16:00

**Understanding the Origin of Non-Ionizing Phonon Bursts seen in Phonon Calorimeters and Superconducting QUBITs.****Speaker**

Matt Pyle

16:00