## **Session Program**

22-26 Apr 2024



## 24th IEEE Real Time Conference - ICISE, Quy Nhon, Vietnam

Poster B

## Thursday 25 April

	ter B Pr Session   Location:
	ign and tuning of a fast beam energy selection control system for CYCIAE-2 otron beamline
Spe	
Qiqi	
Onli CIAE	ne parameter identification and control in the commissioning of nozzle for
<b>Spe</b> a Xion	
A 10	)-Gb/s Serial Link Transmitter With 4-Tap FFE Function in 55-nm CMOS
<b>Spe</b> a Quno	aker qi Shi
A hi	gh-precision two-stage Time-to-Digital Convertor in 180 nm CMOS Technolo
<b>Spe</b> a Jiajui	
A di	gital LLRF system based on phase tracking for HALF linear accelerator syst
<b>Spe</b> a Zher	aker Iyan Li
	<6.25-Gbs Serial Link Transmitter Core in 0.18-μm CMOS for high-speed fro ASICs
<b>Spe</b> a Jiach	aker eng Guo
	ign of a 0.8 V Low-voltage High-rate Prototype Readout ASIC for the μRWE ed Inner Tracker Detector
<b>Spe</b> a Mr Jia	aker aming Li
A ra	diation trace recognition framework for the Timepix event data
Spea	aker
Mr Ti	ình Nguyễn Ngọc Quốc
	st front-end readout design for NICA-MPD shashlik electromagnetic rimeter
Spe	aker
Mr X	inchi Ran
A lo	w-complexity MLSE algorithm for the NRZ high-speed transceivers
Spea	a <b>ker</b> gwei Zou
DODE	

**Speaker** Mr 强 唖

### The IMPix-S2, a hybrid pixel readout ASIC for beam monitoring

Speaker

xiaoyang Niu

### A 2.56 Gbps 1:16 Deserializer with a full-rate Clock and Data Recovery for High-Energy Physics Experiments

#### Speakers

Prof. Di Guo, Qiangjun Chen

## Design of a 14-bit 40MSPS Pipeline Regional ADC for Monolithic Active Pixel Sensors.

**Speaker** Yuan Tian

#### Design of a 11-bit column-parallel ADC for Monolithic Active Pixel Sensor

**Speaker** Weijia Han

## A pixel matrix prototype chip with high-precision time measurement for CMOS pixel detectors

Speaker

Mr Boyu Cheng

## First performance results for the ZDC Readout Electronics of the external target experiment at HIRFL-CSR

**Speaker** Xianqin Li

## Optimization of Energy Resolution in Topmetal-ii- Pixel Detector: An Exploration of Neural Network and Curve Fitting Strategies

**Speaker** Ni Fang

#### Prototype Design of Data Converter Module for LLRF Applications

Speaker

Mr Qiutong Pan

#### Design of an FPGA-based USB 3.0 controller

Speaker

Zhe Ning

#### Methods for On-Orbit FPGA Firmware Update and Verification Based on FLASH

Speaker

Ran Chen

#### Design of application of the CDAU, a common data acquisition unit for HIAF

Speakers

Chengcheng Liu, Mr Honglin Zhang, Prof. Haibo Yang, Mr Jieyu Zhu, Mr Xianqin Li, Prof. Chengxin Zhao

### Prototype Design of Readout Electronics for the Multiple Sampling Ionization Chamber at HIAF - HFRS

## Study on the Design and Production of a Prototype Liquid Level Detection Equipment Utilizing Geiger-Muller Detector

Speaker

Mr Dang Quoc Trieu

### Developing an Arduino-Based Peak Detector Circuit for Gamma Spectrum Measurement

Speaker

Ms Thi Minh Hien Nguyen

#### Design of Nupix-A2, a Monolithic Active Pixel Sensor for Heavy-ion Physics

#### Speaker

Ju Huang

### Measurement Module of Dispersion Interferometer for Real-Time Plasma Density Control at Globus-M2 Tokamak

**Speaker** Dr Svetlana Ivanenko

## Development and commissioning of the beam diagnostics for CIAE proton therapy beamline system

**Speaker** Yang Wang

#### The HIPA radio frequency control system application

Speaker Mario Jurcevic

## Track reconstruction for the ATLAS Phase-II High-Level Trigger using Graph Neural Networks on FPGAs

Speaker

Santosh Parajuli

#### Study of Decoupler: Empowering FPGA Debugging with ESP32 and IoT

#### Speaker

Yifan Yang

#### Synchronization between detector and motion axes in a neutron instrument

Speaker

Harald Kleines

#### Alarm and recovery system in the Belle II operation

Speaker

Takuto Kunigo

### Real Time FFT Calculation Using FPGA PCIe card for KSTAR Magnetohydrodynamic Analysis

**Speaker** Mr Weiguo Que

A lock-in amplifier module for CO2 dispersion interferometer on EAST tokamak

Speaker

Yuan Yao

### **Design and Implementation of Single-server DAQ System for HEPS-BPIX4**

#### Speaker

Mr Xuanzheng Yang

## Design of the data acquisition system for the transition radiation detector prototype

Speaker

Hui Wang

### Design of Large Dynamic Range Readout Electronics for the Prototype Calorimeter of VLAST

Speaker

Qian Chen

### Design of a Pixel Readout Chip for Silicon Drift Detector With Event Driven Readout Method

**Speaker** Mr Wenxuan Cao

## Thermal neutron induces Single-Event Upsets in the FPGA used in particle physics experiments

**Speaker** Chihiro Yamada

#### Nupix-H1, a MAPS for real time beam monitoring at HIAF

**Speaker** Hong Yuan

## Research and Application of SIMD-Based Online Data Processing Acceleration Technology

Speaker

Mr Pengfei Xiao

#### The front-end electronics of the Hyper-Kamiokande far detector

Speaker

Alessandro Di Nola

#### Development of warm readout electronics for Time-division Multiplexing SQUID

Speaker

Mr Nan Li

### A Compact Readout Electronics based on Current Amplifier for Micromegas Detector

Speaker Ting Wang

## Development of a High-Bandwidth Waveform Processing System using RFSoC for RI Beam Experiments

**Speaker** Shoko Takeshige

# Hi'BT : a pixel sensor-based heavy-ion beam telescope for ion-track localization at HIAF

Speaker

Dr Honglin Zhang

### Nupix-H2: a Monolithic Active Pixel Sensor for Multidimensional Measurement

#### Speaker

Ms Rui He

## A Frequency Division Multiplexing Room-temperature Electronics Readout Scheme for TES Calorimeter Arrays

Speaker

Jianguo Liu

#### High speed readout electronics for new generation Pulsed Muon Spectrometers

Speaker

Francesco Caponio

#### High-throughput Custom Monitoring for the Mu2e TDAQ System

Speakers

Mr Sean Cummings, Michael H L Wang

#### Front-end Electronics for the Prototype of HERD Transition Radiation Detector

Speakers

Mr Jieyu Zhu, Mr Haibo Yang, Mr Yangzhou Su

### Real Time Data Acquisition for PET Detector Evaluation based on dual-polarity Charge-to-Digital Converter

**Speaker** Bo Wang

#### A 25 Gbps VCSEL Driving ASIC for Detector Front-end Readout

**Speakers** Cong Zhao, Prof. Di Guo

#### Advances in Readout Electronics for STCF ECAL

**Speaker** Hanlin YU

#### An FPGA-based ADC for PET module applications

Speaker songqing liu

## The Software Platform of LabVIEW-FPGA-Based Real-time Processing System in Keda Torus eXperiment

Speaker

Jiahong Jiang

### AI-Based Online Spectral Classification of Copper Alloys using Prompt-Gamma Neutron Activation Analysis (PGNAA)

Speakers

Helmand Shayan, Dr Markus Lange-Hegermann

## A Fully Reconfigurable Pipelined Architecture for FPGA-based Parallel PRBS Test Pattern Generators

Speaker

Chengyang Zhu

## CMOS MAPS with a novel readout scheme for the STCF Inner tracker

### Speaker

Dongwei Xuan

## Hybrid Scrubber of SEM and Picoblaze for FPGA on COMET Read-out Electronics

#### Speaker

Eitaro Hamada

12:55