

# **25th IEEE Real Time Conference - La Biodola, Elba, Italy**

**Monday, 25 May 2026 - Friday, 29 May 2026**

**La Biodola - Isola d'Elba (Italy)**

## **Scientific Program**

## **Data Acquisition and Trigger Architectures**

DAQ system architectures as well as conceptual design for future applications.

## **Front-End Electronics, Fast Digitizers, Fast Transfer Links & Networks**

Hardware specific such as Ultra-fast WFDs, ADCs, TDCs, SCAs in the GHz range and their applications.

("Front End Electronics and Fast Digitizers"

Ultra-fast ADCs, TDCs and Switched Capacitor Arrays in the GHz range and their applications.)

## **Real Time Diagnostics, Digital Twin, Control, Monitoring, Safety and Security**

Design and implementation from small to large scale systems.

("Real Time System Architectures and Intelligent Signal Processing"

Includes system architectures dealing with realtime data acquisition, extraction, compression, intelligent signal processing and storage applied to the physical sciences.)

## **AI, Machine Learning, Real Time Simulation, Intelligent Signal Processing**

System architectures dealing with real-time data processing. Machine Learning and AI Acquisition specific. Methods, algorithms, implementation.

("Real Time Simulation"

Simulation of real time DAQ)

## **Emerging Technologies, New Standards, Feedback on Experience**

Hardware standards, software, tools and techniques. Discussion on development or implementation of systems with a focus on the unexpected problems and lessons learned along the way.

("Emerging Technologies, New Standards and Feedback on Experience"

Hardware standards such as ACTA/ $\mu$ TCA. Software, tools and techniques. Discussion of

development or implementation of a system with a focus on the unexpected problems and lessons learned along the way.)

## **Industry and Industry collaboration**

Industry product, collaborative work with the physics community

## **Special**

Abstracts that don't fit in any of the other tracks