TIPP 2021

Monday, May 24, 2021 - Friday, May 28, 2021

Scientific Program

Readout and Data Processing

This theme includes all aspects of data processing that act in combination with detectors: front-end electronics for amplification and signal conditioning; electronics, firmware and software for event triggering and data acquisition; data storage and preservation.

Readout: Front-end electronics

Readout: Trigger and DAQ

Readout: Data Transfer Links and Networks

Experiments

Multi-component detector systems and upgrades to existing detectors. This theme includes overview talks from the major experiments and projects across the fields (collider experiments and upgrades, intensity frontier experiments, astrophysics and cosmology, neutrinos, dark matter searches, gravitational waves, large scale R&D projects , etc). We encourage contributions illustrating the limitations of the current experiments and focus on ideas on how to break these barriers.

Experiments: Trackers

Experiments: Calorimeters

Experiments: High energy physics

Experiments: Neutrino

Experiments: Dark Matter Detectors

Experiments: Space and particle astrophysics

Experiments: Precision techniques at low energy

Sensors

Dedicated to recent developments in various detector technologies. Individual sessions will cover detectors based on absorption of electromagnetic or hadronic showers in dense media, on charge collection in semiconductor devices, on signal generation in gaseous media, on photon detection,

and other novel technologies. Typical examples are sampling, crystal calorimeters, and dual-readout calorimeters; silicon strips and pixel detectors; proportional and time-projection chambers; phototubes and silicon photo-multipliers.

Sensors: Light-based detectors

Sensors: Photo-detectors

Sensors: Emerging Technology

Sensors: Solid-state position sensors

Sensors: Solid-state calorimeters

Sensors: Noble liquid detectors

Sensors: Gaseous Detectors

Technology Transfer

Including: Industry Liaisons, Health and Healthcare Applications, Biology and Life Sciences Applications, Material Science Applications.
Although large experiments designed and operated over decades do not always allow operation at the forefront of technology, a large number of experts in leading labs in particle physics are nevertheless active on this frontier. As a result, new sensor and chip development, precision mechanics, and computing developments did find their way to industry and society (e.g. material science, health care and biology). Conversely, the particle physics community profits from advances in industry like smaller CMOS technology. This theme is concerned with the question: can particle physics labs and industry move from the present situation of mutual interest toward a more integrated strategy?