



XVII CPAN DAYS. VALENCIA

Wednesday 19 November 2025

COMCHA: Quantum Computing, Simulations, PID & Advanced Techniques (14:00-16:30)

-Moderadores: Arantza Oyanguren; Luca Fiorini

| time  | [id] title                                                                                                          | presenter                                |
|-------|---------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| 14:00 | [1031] Quantum Computing and experimental High Energy Physics                                                       | LUCIO MARTINEZ, Miriam                   |
| 14:15 | [1146] Exploring Quantum Computing Paradigms for Particle and Astroparticle Applications                            | GARCÍA HERNÁNDEZ, Maria Inmaculada       |
| 14:30 | [1056] Quantum Machine Learning model based on qudits for anomaly detection in high-energy physics data             | CAROU LAIÑO, Miranda                     |
| 14:45 | [1026] Fast simulation for scattering muography applications using generative adversarial neural networks           | LOPEZ, Ruben                             |
| 15:00 | [1059] Event Generation Acceleration on AI Engine Cores: A Case Study of $\sqrt{s}$                                 | LEGUINA, Pelayo                          |
| 15:15 | [1020] Muon shower tagging in the barrel muon system of the CMS experiment                                          | PRADO PICO, Javier                       |
| 15:30 | [1075] Tau Reconstruction at FCC-ee: Classical vs Deep Learning Particle Flow Methods for SM Precision Measurements | ARQUERO PEINAZO, Olmo                    |
| 15:45 | [1048] Autoencoders for real-time event selection at the LHCb experiment                                            | LAGUARTA, Paloma                         |
| 16:00 | [1013] Multi-Scale Decomposition and Transformers in Compton Image Reconstruction                                   | ALBIOL, Kiko                             |
| 16:15 | [1008] Inclusive Flavour Tagging in LHCb                                                                            | Sr. SEVILLA, Borja<br>Sr. SEVILLA, Borja |

COMCHA: Institutes, Infrastructures and Entities (17:00-19:15)

-Moderadores: Arantza Oyanguren; Luca Fiorini

| time  | [id] title                                                                         | presenter                               |
|-------|------------------------------------------------------------------------------------|-----------------------------------------|
| 17:00 | [1079] Software and computing activities at UB                                     | MARIN BENITO, Carla                     |
| 17:15 | [1002] From Rare Events to Cosmic Correlations: Computational Developments at CAPA | GÓMEZ MALUENDA, Héctor                  |
| 17:30 | [1109] Computing Challenges at Univesity of A Coruna                               | MARTINEZ SANTOS, Diego                  |
| 17:45 | [1089] High-Low activities at Valencia                                             | FIORINI, Luca                           |
| 18:00 | [1147] ARTEMISA: High Performance Computing for Machine Learning Applications      | GARCIA NAVARRO, Jose Enrique            |
| 18:15 | [1148] PIC: Port d'Informació Científica                                           | ERIKSEN, Martin                         |
| 18:30 | [1104] ROOT: Status and Prospects                                                  | PIPARO, Danilo<br>PADULANO, Vincenzo E. |
| 18:45 | [1102] IRIS-HEP: Institute for Research and Innovation in Software in HEP          | WATTS, Gordon T.                        |
| 19:00 | [1103] HSF: The HEP Software Foundation                                            | RODRIGUES, Eduardo                      |

# Thursday 20 November 2025

**COMCHA: Detector Design, Reconstruction and Analysis (9:00-11:30)**

| -Moderadores: Arantza Oyanguren; Luca Fiorini |                                                                                                                                                                    |                                     |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| time                                          | [id] title                                                                                                                                                         | presenter                           |
| 9:00                                          | [1111] Generative Surrogate Models for Differentiable Optimization of a Parallel-Plate Avalanche Counter with Optical Readout                                      | Sra. PEREIRA MARTÍNEZ, María        |
| 9:15                                          | [1009] Machine Learning-based energy reconstruction with FPGAs at the ATLAS Tile Calorimeter for the HL-LHC                                                        | WANG, Rui                           |
| 9:30                                          | [1115] GNN-based reconstruction for LHCb Upgrade II ECAL                                                                                                           | SOUZA DE ALMEIDA, Felipe Luan       |
| 9:45                                          | [1083] FPGA performance for signal reconstruction of the ATLAS Tile Calorimeter in the HL - LHC environment                                                        | AHUJA, Sonakshi                     |
| 10:00                                         | [1014] When Less is More: Towards Lightweight Graph Neural Networks for Efficient Particle Reconstruction and Identification in LHCb's Next-Generation Calorimeter | PEREZ, Cilicia Uzziel               |
| 10:15                                         | [1025] A Machine Learning Framework to improve the search for New Physics in the ATLAS experiment                                                                  | PÉREZ GARCÍA, Alejandro             |
| 10:30                                         | [1071] Machine-Learning-based CTAO Telescope Data Processing                                                                                                       | Prof. BARRIO, Juan Abel             |
| 10:45                                         | [1149] COMCHA: News & Prospects                                                                                                                                    | OYANGUREN, Arantza<br>FIORINI, Luca |