



ID de la contribución : 24

Tipo : **Talk**

The NNPDF framework for PDF determination

Parton Distribution Functions (PDFs) are extracted from experimental data through high-dimensional global fits that combine perturbative-QCD calculations, flexible parametrizations, correlated systematic uncertainties, and statistical inference. As experimental precision improves, technical choices like dataset selection and theory settings become crucial.

However, one must not forget technical settings such as optimization strategy, uncertainty propagation or, in the case of NNPDF, the parametrization architecture that defines the Neural Network.

In this talk, I will present the methodology underlying recent NNPDF analyses, focusing on the open-source fitting framework and our strategies to obtain an ensemble of Neural Networks that produces a faithful representation of the uncertainties of the PDF, which requires thousands of fits to the same underlying data using both GPUs and distributed computing.

I will discuss closure tests and future tests as tools for validating as well as benchmarks designed to isolate methodological effects from differences in data and theory.

Primary author(s) : Dr. CRUZ MARTINEZ, Juan Manuel (Universidad de Sevilla)

Presenter(s) : Dr. CRUZ MARTINEZ, Juan Manuel (Universidad de Sevilla)

Clasificación de la sesión : COMCHA

Clasificación de temáticas : COMCHA