

Statistical methods and comparisons of different unfolding techniques using RooUnfold

A seminar by Lydia Brenner

National Institute for Subatomic Physics - Nikhef, Amsterdam (NL)

Thursday 26 Mar 2026 | 14:30-15:30

Room BENVENUTI

Department of Statistical Sciences

This seminar will discuss the usage of unfolding as applied to experiments in High Energy Particle physics experiments. A focus will be given to how these methods are applied to analyses, and how the treatment of uncertainties influences considerations such as the choice of algorithm and regularisation. An example analysis is included to show a statistical comparison of different unfolding techniques and to help guide the choice of unfolding method and regularisation strengths. The included unfolding methods for the comparison are: Iterative Bayes, Truncated Singular Value Decomposition, Iterative dynamically stabilized, TUnfold, Gaussian Processes and in-Likelihood unfolding. Additionally, possible improvements and extensions are discussed.



UNIVERSITÀ
DEGLI STUDI
DI PADOVA

