Currently on the market and involved in the InterpretingLHCresults forum

CheckMATE

MadAnalysis5 PAD

MadAnalysis 5⬚ is a generic user-friendly framework for phenomenological investigations at particle colliders, i.e. to perform physics analyses of Monte Carlo event files. Its Public Analysis Database (PAD)⬚ comprises a growing collection of LHC analyses, which have been implemented in the MadAnalysis 5 framework for the purpose of recasting. Delphes3⬚ is used for the detector simulation. For each implemented analysis, a detailed validation note is provided. The PAD follows an open-source policy; contributed codes are published and citable via Inspire⬚. The framework is currently being extended to provide a full recast chain, from Madgraph to limit setting.

Gambit

Rivet

Originally developed as a toolkit for the validation of Monte Carlo event generators, Rivet⬚ (Robust Independent Validation of Experiment and Theory) has become the standard for documenting [unfolded] SM measurements. The top and Higgs groups are also increasingly providing Rivet routines for their analyses. For BSM searches, the difficulty so far has been that these are not unfolded. To allow for the implementation of [folded] BSM analyses, since version 2.5.0beta, Rivet now provides a simple detector smearing machinery; the idea is that each analysis routine can apply the smearings and efficiencies appropriate to its "epoch" of the detector and reco software, and the ID/tagger working points used in the data analysis.

ATOM/Fastlim

SModelS

SModelS⬚ is a tool for interpreting simplified-model results from the LHC. It is based on a general procedure to decompose the collider signatures of BSM models presenting a Z2 symmetry into Simplified Model Spectrum (SMS) topologies, which are then confronted with the relevant experimental constraints. The current SModelS database comprises mostly supersymmetry searches with missing energy, for which a large variety of SMS results from ATLAS and CMS are available. Version 1.0 of SModelS is based on the use of cross section upper limit maps, in version 1.1 this will be extended to efficiency maps.

XQCAT

SUSY-AI

Recast

Not exactly a public recasting tool but a service [under development] to run new models or model points through the full experimental machinery upon request. An integral part of the official data and analysis preservation efforts. See http://recast.perimeterinstitute.ca⬚ and https://recast-demo.cern.ch⬚.

-- SabineKraml - 2016-06-23

This topic: Sandbox > RecastingTools
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