GAMBIT: The Global and Modular Beyond-the-Standard-Model Inference Tool

The GAMBIT Collaboration

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Abstract

blah

1 Introduction

Context of GAMBIT:
Brief history of BSM global fitting code/collabs/studies
What we do better (in a nutshell)

2 Design concept

general description
including rollcall system, functor graph, definitions of "modules", "backends", "capabilities", "dependencies"; glossary?

3 Modules

Short summary (1-2 paragraphs) of the modules we have already

3.1 Module function declaration

4 Backends

Details of backend system

4.1 BOSS

4.2 Backend function declaration

5 Hierarchical model database

5.1 Model declaration

model definition process
map to capability

5.2 Recasting models

interpretation functions (as parent, as X)

6 Dependency Resolver

graph design + solution

7 Statistics and scanning

general overview of statistical framework(s) and scannerbit.
specific likelihood forms in appendix.

8 User interface and input file

command line switches, general usage
yaml file parsing and syntax, structure, etc.

9 Utilities

9.1 Type handling

9.2 Logging

9.3 Output

9.4 Exceptions

9.5 Random numbers

9.6 Funktions? Base Fuctions?

10 Configuration and automatic component registration

build system + harvester scripts

11 Minimal examples

using ExampleBits + spartan

12 Releases and support

Describe different releases Website and support feat. FAQ and known issue + bugs, serving, code availability, release strategy

13 Summary

14 Acknowledgements

A Quick start guide

B Dependencies and supported compilers

C Likelihood forms