# Preparing contributions to CERN reports (school, workshop, and conference proceedings)

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#### **Abstract**

This document explains instructions for authors who want to prepare electronic copy to be published as a CERN Report.

### 1 Bayesian in a nutshell

Credibility Posterior Bayes Theorem Prior

# 2 Frequentist in a nutshell

Conditioning p-value Properties: Type I/II Error, Coverage test statistic distribution of test statistic

# 3 Questions

- 3.1 What is the difference between goodness of fit and hypothesis testing?
- 3.2 What is "profiling"?
- 3.3 What are "asymptotics"?
- 3.4 Why do we choose the profile likelihood ratio test statistic?
- 3.5 What is the difference between a p-value and a confidence level?
- 3.6 How do we calculate a p-value?
- 3.7 How does do we incorporate systematics? Rephrased: How do we make sure our p-values are robust against systematic uncertainties?
- 3.8 What does technically does it mean to say a parameter point is excluded?
- 3.9 What, technically, does it mean to claim a discovery?

# 3.10 HEP Legacy

What is the difference between the LHC and Tevatron Higgs limit procedures? What is CLs? What is the difference between the LEP and the Tevatron Higgs limit procedures? What is the Feldman-Cousins? What is PCL?