

## Follow-up:

- 1) **The Monte Carlo method is well and compactly explained in chapter 3 of Cowan's textbook :**

**G.Cowan, Statistical Data Analysis, Clarendon Press – Oxford, 1998**

Note that **RooFit uses the *acceptance-rejection method*** (paragraph 3.3)

- 2) **Being able to generate distributions according to some model can be rather useful in order to use the so called *MC toys technique*.**

have a look for instance at:

[http://roofit.sourceforge.net/docs/tutorial/fitgen/roofit\\_tutorial\\_fitgen.pdf](http://roofit.sourceforge.net/docs/tutorial/fitgen/roofit_tutorial_fitgen.pdf)

A specific application of the MC toys is set up when one needs to estimate the ***p-value*** of a distribution to determine the **statistical significance of a physical signal.**

See for instance slides 5-6 of A.P. talk @ Conference ACAT2016:

[https://indico.cern.ch/event/397113/contributions/1837858/attachments/1213108/1770056/pompili\\_acat16\\_final.pdf](https://indico.cern.ch/event/397113/contributions/1837858/attachments/1213108/1770056/pompili_acat16_final.pdf)