# A Computer tools in particle physics

#### Information

This is the website for the course Computer tools in particle physics by Avelino Vicente, to take place at Instituto de Física Corpuscular (CSIC/Universidad de Valencia).

Dates: Monday 22/05/2017 - Friday 26/05/2017

Place: IFIC - Sala de Audiovisuales (Nave experimental)

**Time:** 15:00

Duration: 1.5 h for the first session and 1 h for the rest

### Material and required programs

This will be a hands-on course, where all participants are encouraged to run all codes in their own laptops. The only required programas are Mathematica, a LaTeX compiler and Fortran 90 and C++ compilers. If you wish to fully participate please download the following files:

• For lecture 1: run\_sarah\_Scotogenic.nb and Scotogenic.tar.gz

• For lecture 2: micromegas 4.2.5.tgz

• For lecture 4: run\_sarah\_DarkBS.nb, DarkBS.tar.gz and plotDarkBS.txt

You should also download the latest versions of the codes we are going to use (exception: for lecture 2 we will use an old version of MicrOMEGAs, see above). You can find them in their official websites (links on your right). Finally, the slides of the course are available here: introduction, lecture 1, lecture 2, lecture 3, lecture 4 and lecture 5.

#### References

The course will mainly focus on the material contained in the following notes:

Computer tools in particle physics, A. Vicente, arXiv:1507.06349

#### **About**

This is the website for the course Computer tools in particle physics. IFIC (CSIC/U. Valencia), May 22nd - 26th, 2017.

#### Links Input/Output

## Code

- SARAH
- SPheno
- MicrOMEGAs
- MadGraph
- MadAnalysis
- FlavorKit

#### Contact

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For questions and comments, you can send me an e-mail.