

Histofit[®] version 1.0

Histofit is an Excel[®]-based application that computes the most-likely Gaussian curves in an iterative way, so that the sum of those gaussian curves fits the slope angle frequency distribution of a topography. The fitting process is done by minimizing the standard error using optimisation processus of the Excel solver. This tool enables to fit the sum of up to 5 gaussian curves to a target function represented here by a slope angle histogram. It contains moreover the possibility to display the Gaussian curves under the target curve. In order to help the Excel application getting the best-fitting Gaussian curves and to be able to start fitting the target curve, initial parameter, such as the number of Gaussian curves with their estimate mean and standard deviation must be set manually. These can be defined according to the shape of the target function, where the trend obviously shows some unsteadiness in its distribution. A practical exemple of the application of histofit[®] can be found under Loye, A., Jaboyedoff, M., and Pedrazzini, A.: Identification of potential rockfall source areas at a regional scale using a DEM-based geomorphometric analysis, Nat. Hazards Earth Syst. Sci., 9, 1643-1653, 2009. (<http://www.nat-hazards-earth-syst-sci.net/9/1643/2009/nhess-9-1643-2009.html>)

Disclaimer

Histofit is a freeware developped at the Institute of Geomatics and Risk analysis (IGAR) at the University of Lausanne by the Prof. Michel Jaboyedoff and is available under www.unil.ch/igar. No warranty is made by IGAR for the functioning of the software and no responsibility is assumed by IGAR in the use of this tool.

Support

There is no formal ongoing support for this freely distributed public domain software. However, if you have any questions or suggestions, please contact:

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Run histofit

Histofit should run with all computer having the Excel[®] software of Microsoft office. Before clicking on histofit.xls, ensure that your computer accepts the Excel[®] macros. When opening histofit.xls, click *Enable Macros* and follow the instruction written in the yellow box. In case that histofit doesn't open or that the Excel Solver does not run, please check the Excel security level of your computer:

- open an empty Excel sheet
- click on the toolbar: Tools --> Macro --> Security
- set the Security level to Medium
- load histofit.xls and enable Macros

Moreover, be sure that the Solver is activated in your Microsoft Visual Basic[®]. If this is not the case:

- go to C:\Program Files\Microsoft Office\OFFICE11\Library\SOLVER and run the file SOLVER.XLA by simply clicking on it.
- Make sure that the SOLVER add-in is working under Microsoft Visual Basic[®]
 - open Microsoft Visual Basic[®] from the Histofit Excel sheet : Tools --> Macro --> Visual basic editor
 - click on the toolbar: Tools --> References and check the SOLVER add-in
 - Save the Macro and return to Histofit

good job!