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Installation Instructions

If you have downloaded PEST

To install PEST, create a new directory (eg. *c:\pest*) and unzip the contents of *pest13.zip* into that directory. Next add the PEST directory to the `PATH` environment variable.

If you have received PEST on a memory stick

Create a new directory (eg. *c:\pest*) on your hard drive and copy all files from the *pest* directory and subdirectories of the memory stick to your hard drive. Next add the PEST directory to the `PATH` environment variable.

Documentation

The PEST manual is supplied in pdf format. There are two manuals. *newpestman1.pdf* describes PEST, SENSAN and the CMAES_P and SCEUA_P global optimisers supplied with PEST. *newpestman2.pdf* documents PEST utility support software, including that used for parameter and predictive uncertainty analysis.

modules.pdf describes FORTRAN 90 modules which are supplied with PEST (see the *modules* subdirectory). Programmers can employ these modules for management of communications between their applications and model input files where model runs are undertaken in both serial and parallel modes. Communication between an application and the model with which it communicates is implemented using the same template and instruction file concepts that PEST employs.

Other Software

Many programs have been written to expedite PEST usage in common modelling situations. These include:

- the PEST Groundwater Utilities,
- the PEST Surface Water Utilities, and
- PLPROC

Programs of the Groundwater and Surface Water Utility suites can provide great assistance in file preparation for a PEST run by automating most of the tasks involved in this process.

Included in the Groundwater Utilities are a number of programs which can be used to parameterise MODFLOW, FEFLOW and other models using pilot points and geostatistically-based random fields, and to introduce geostatistically-based (and other) regularisation constraints into the model calibration process. When used in conjunction with PEST, this software is more powerful by far than any other groundwater parameterisation/calibration/uncertainty analysis software available today.

A growing number of utility programs support the use of PEST with MODFLOW-USG.

PLPROC stands for “parameter list processor”. It was written to expedite the use of PEST with models which use unstructured grids. These include MODFLOW-USG, FEFLOW and TOUGH2.

The Surface Water Utilities include a comprehensive time series processor named TSPROC which is an extremely powerful aid to surface water model calibration. Using TSPROC, calibration can be undertaken based on one or more observed time series, as well as on important attributes of these time series such as flow volumes accumulated over various times, as well as certain flow statistics and flow exceedance fractions. Functionality is included for automatic construction of PEST input files even for complex parameterisation problems.

To download this software, visit

http://www.pesthomepage.org