Conventions for Matlab Files and Variables for Bookkeeping Purposes

We will be using the following rules to name all Matlab files and to choose variable names in Matlab. There is no real deep meaning and the only justification is to ease confusion and for the purpose of bookkeeping.

1. There are two types of files in Matlab that have the dot-m extension, one is the script file and the other is the function file. One can directly run a script file by clicking the s̈ave and run̈button or by typing the

name of the file (but leave out the dot-m extension) on the command line, but a function defined in a function file cannot be run that way. One must explicitly call the function in question either on the command line or by running a script program that calls the function. However since both types of files have exactly the same extension, one cannot tell from the file extension which is which. One therefore sometimes makes the mistake of running a file that contains a function and thus results in an error complaining that certain variables are not defined (on the first line of the function program where

the first input parameter value is needed).

In order to prevent that from happening, we will adopt the convention to name all Matlab function files with a name that ends in the underscore. For example D̈EGriewangkN.mïs the name of a script file, and the name of the function file that it calls is D̈E33_.m::

2. In Matlab a variable can represent a scalar, a vector, or a matrix. This can make the codes difficult to understand. We adopt the following variable naming convention to alleviate the potential confusion. The variable name of

a scalar must start with a lowercase letter, but does not have to consist of all lower case letters. For example we can use names like n̈pör ẗheScalar:̈ The variable name of a vector must start with a single uppercase letter, and must contain some lowercase letters. We can use, for example, V̈aluesänd Ëigen Vector1:̈ The names of matrices must start with two or more uppercase letters. For example we can use names such as M̈ATRIXreloadedänd G̈ENEpopulation:̈ Of course there will still be potential confusions. In particular a vector can be a column or row vector. We will use column vectors here unless specified

otherwise.