

pairs (with panel functions)

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Draws advanced pairplot (see example below). Based on the base function `pairs`, with original code written by R-code members and panel functions added by Francois Gillet.

To define the function, source the `panelutils.r` file from Numerical Ecology with R book:

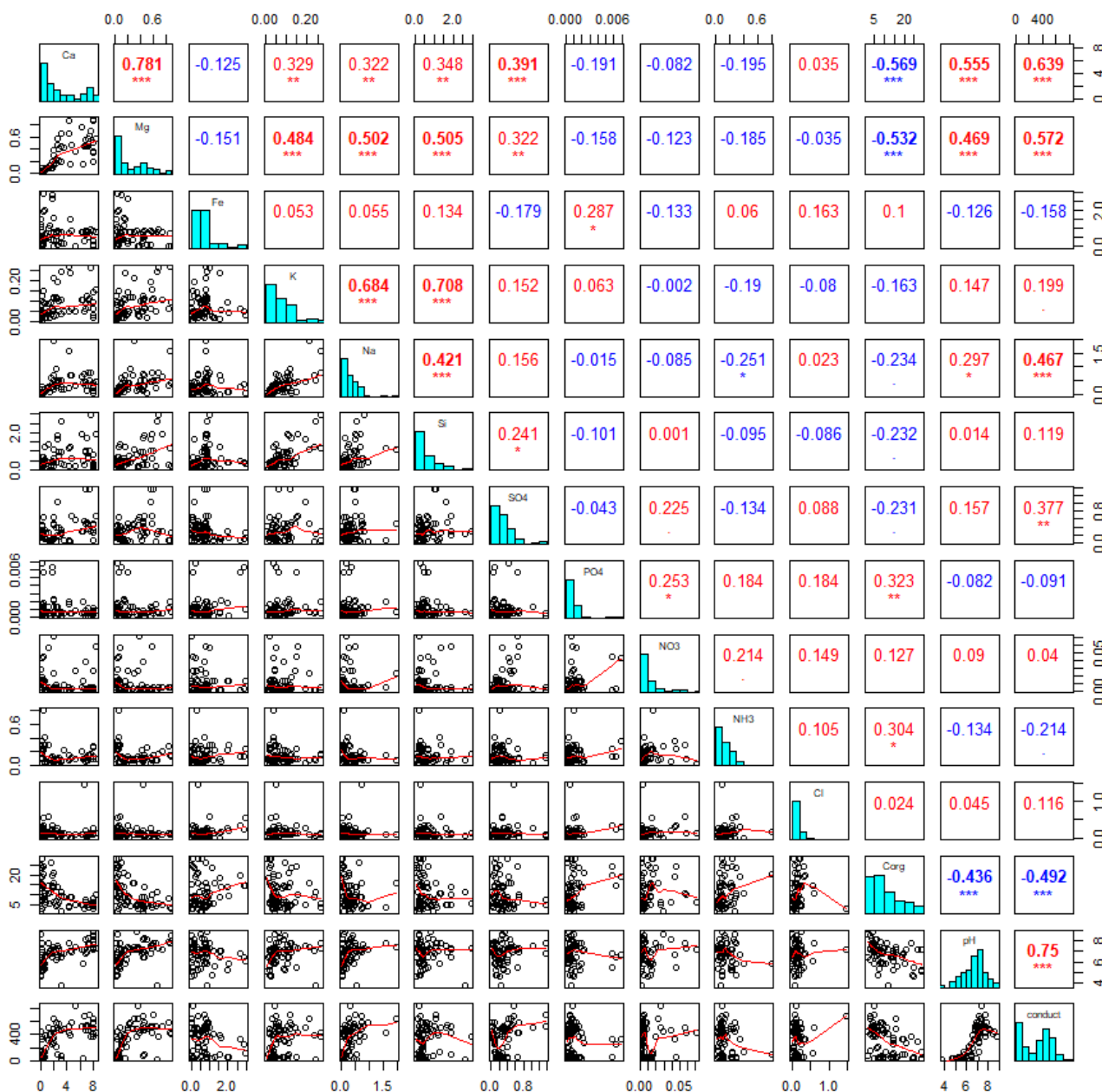
source

```
('https://raw.githubusercontent.com/zdealveindy/anadat-r/master/scripts/NumEcolR2/panelutils.R')
```

Example of use (using environmental data from the dataset [Vegetation of Carpathian wetlands](#), after removing the 15th variable which is slope and not water chemistry):

source

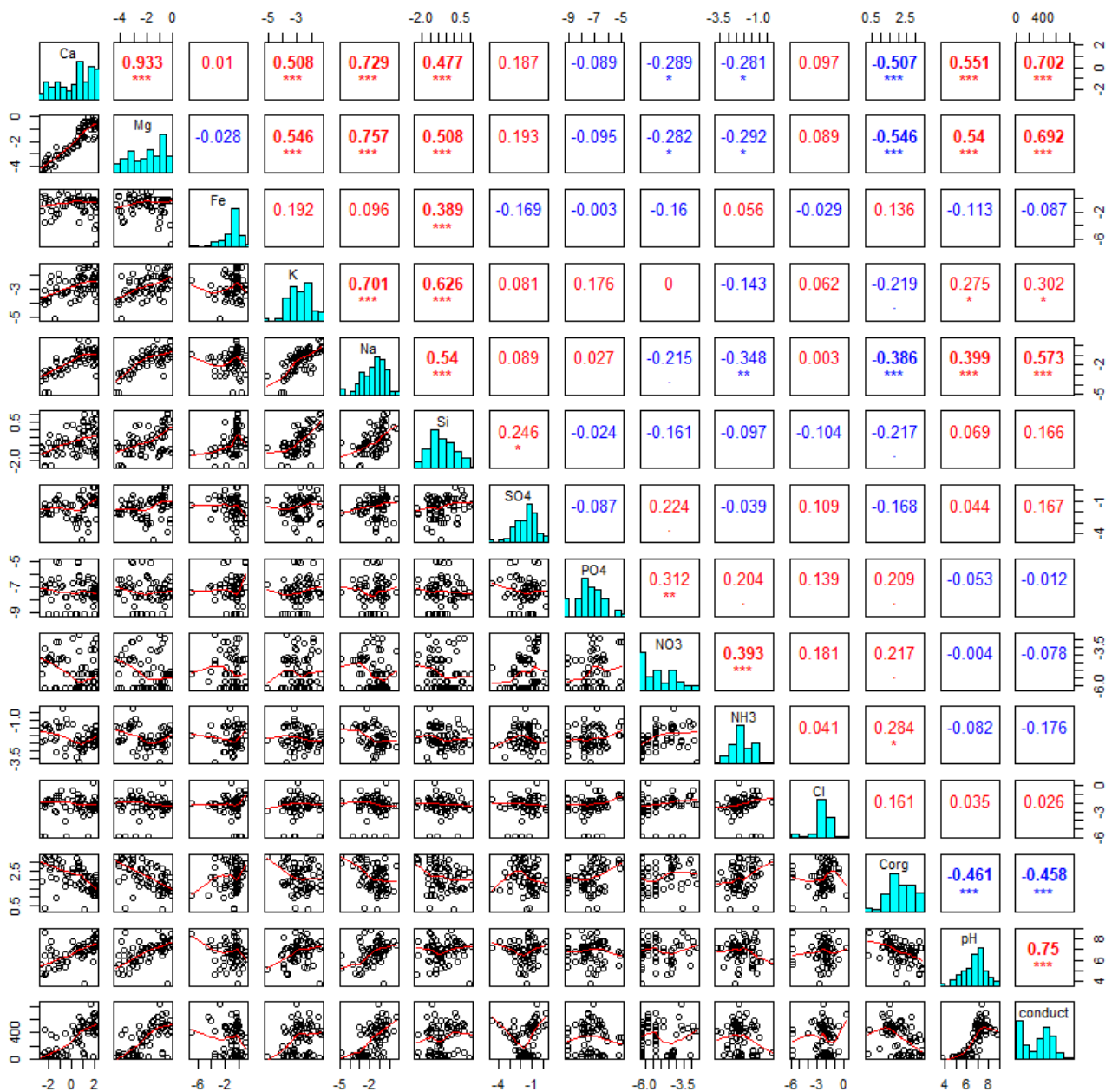
```
('https://raw.githubusercontent.com/zdealveindy/anadat-r/master/scripts/NumEcolR2/panelutils.R')  
chem <- read.delim  
( 'https://raw.githubusercontent.com/zdealveindy/anadat-r/master/data/chemistry.txt', row.names = 1 ) # reads the 'chem' dataset  
pairs(chem[, -15], lower.panel=panel.smooth, upper.panel=panel.cor,  
diag.panel=panel.hist)
```



Panels in the upper triangle = correlation coefficients with results of significance testing (displayed by the number of stars), red for positive and blue for negative relationships, values in bold are significant at least at $P < 0.05$. Panels on diagonal = histograms of distribution. Panels on lower triangle = scatterplot with loess smoother curve.

Most of the variables need to be log-transformed (they have heavily right-skewed distribution); after the log-transformation, the result looks like this:

```
chem_t <- chem
chem_t[, 1:12] <- log (chem[, 1:12])
pairs(chem_t[, -15], lower.panel=panel.smooth, upper.panel=panel.cor,
diag.panel=panel.hist)
```



Note that the package `car` contains the function `scatterplotMatrix`, which is doing something similar (and perhaps could be also further customized).

From:

<https://www.davidzeleny.net/anadat-r/> - Analysis of community ecology data in R

Permanent link:

https://www.davidzeleny.net/anadat-r/doku.php/en:customized_functions:pairs2

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