Elements of Crustal Geomechanics (ECG)

Content of site www.cambridge.org/cornet

The "Resources" tab of the site www.cambridge.org/cornet leads to four entries :
Notes for users,
Solutions,
Linked sites,
Focal mechanisms inversion
Fracture imaging and hydraulic testing in boreholes.

You are presently reading the file "Notes for users".

The entry "**Solutions**" provides access to a pdf file, which contains worked solutions to the various exercises that have been introduced at the end of the first nine chapters of Elements of Crustal Geomechanics (ECG) as well as lists of papers for discussion as proposed in ECG's final chapters.

The entry "**Linked sites**" provides access to the site "Labex – Geothermie", which contains among other data, the location of microseismic events induced by the 1993 hydraulic stimulation conducted on the Soultz experimental site in France. It contains also all the wave forms of signals received on downhole stations and that were used for the event location determination.

The entry '**Focal_mechanisms_invers**' proposes a set of codes that may be used for getting information on the regional stress field from a focal plane solutions inversion (see section 13.4 of ECG). In addition some data are proposed. They correspond to the data analysed by Maury et al., 2013 (see full reference in ECG) and are integrated in a more general discussion in section 14.4. An explanatory manual on how to use the various codes is also provided (manual.pdf).

The entry **'Fracture imaging and hydraulic testing in boreholes**' concerns real data on electrical borehole imaging (section 1.3.2) and on hydraulic testing in boreholes for stress determination (section 13.2). It includes five entries:

Entry : "**Pressure data analysis**" proposes the Matlab (version 2013) code "Closingpressure.m" to treat data stored in excel file 'Prelim-GM6-12-8-13.xlsx' as an example of stress measurement in a very porous sandtone (exercise 13.1.2).

Entry : "**Fracture orientation dertermination**" is a set of Matlab codes that must be accessible when using the tools discussed in exercise 1.5

Entry : "**Data**" proposes three matlab files that are examples of borehole imaging in granite (demo-borehole-image.mat), and hydraulic testing (demo1.mat and demo2.mat) as necessary for exercises 1.5 and 13.1.1. After they have been loaded under matlab, the ploting of PRESS(:,2), yields the interval pressure variation for two different tests in granite (demo1.mat and demo2.mat).

Entry : "**borehole imaging**" proposes the set of matlab codes necessary to plot results of file demo-borehole-image.mat, as discussed in exercise 1.5.