Assessment

To obtain a mark of 5.0

- Program the 2D diffusion equation with bilinear and with biquadratic elements.
- Compute the order of accuracy of your code for both element types for the steady state diffusion equation (look at the online lecture notes).

To obtain a mark greater than 5.0, do one (or more) of:

- Write a 2D elasticity code and demonstrate that it is working correctly with a suitable test problem.
- Perform an order of accuracy test with the method of manufactured solutions (MMS) for a time dependent 2D diffusion problem (using biquadratic elements).
- Write a 2D Stokes code, demonstrate that it works with a suitable test problem, and perform an an order of accuracy test using the MMS.
- Find a cool geological application for any of the codes you have developed and show how your numerical model gives new insight into this problem.

Assessment

- Prepare a short report (<10 pages) including a description of the model, the code implementation and any figures/graphs. All figures/graphs must have labelled axis, etc. Please submit a PDF.
- The source code used to generate your results must be submitted with your report. It is a requirement that we can reproduce your results. Please submit m-files if using MATLAB, and appropriate source files if using another language.
- All reports and code must be submitted by september 15th.
- Please email your submission to antoine.rozel@erdw.ethz.ch
- You can ask as many questions and visit as often as you require (appointment via email please!) to get your code working. This is encouraged and will not negatively influence your final mark.